U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Sundry Print Report

09/03/2024

Well Name: SAN JUAN 30-6 UNIT SWD

Well Location: T30N / R7W / SEC 23 / NWNW / 36.80446 / -107.54646

County or Parish/State: RIO ARRIBA / NM

Well Number: 2

Type of Well: INJECTION - ENHANCED RECOVERY

Allottee or Tribe Name:

Lease Number: NMSF079382

Unit or CA Name:

Unit or CA Number:

US Well Number: 3003924518

Operator: HILCORP ENERGY COMPANY

Notice of Intent

Sundry ID: 2804386

Type of Submission: Notice of Intent

Type of Action: Recompletion

Date Sundry Submitted: 08/02/2024

Time Sundry Submitted: 08:41

Date proposed operation will begin: 09/02/2024

Procedure Description: Hilcorp Energy Company requests permission to isolate the Morrison perforations and recomplete into the Basin Mancos via a lateral sidetrack using the existing wellbore. Please see the attached procedure, current and proposed wellbore diagram, plat, natural gas management plan, directional and anti-collision plans. A closed loop system will be used. A pre-reclamation onsite is not required as the surface is FEE.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

San_Juan_30_6_Unit__2_SWD_Sidetrack_Drilling_Technical_Plan_Rev_1_20240812120106.pdf

Well Name: SAN JUAN 30-6 UNIT SWD

Well Location: T30N / R7W / SEC 23 / NWNW / 36.80446 / -107.54646

County or Parish/State: RIO ARRIBA / NM

Well Number: 2

Type of Well: INJECTION - ENHANCED RECOVERY

Allottee or Tribe Name:

Lease Number: NMSF079382

Unit or CA Name:

Unit or CA Number:

US Well Number: 3003924518

Operator: HILCORP ENERGY COMPANY

Conditions of Approval

Additional

General_Requirement_PxA_20240821144359.pdf

SJ_30_6_Unit_SWD_2_2804386_NOIA_COAs_KGR_08212024_20240821144324.pdf

San_Juan_30_6_Unit_2_Re_Entry_Geo_Report_20240820113903.pdf

Operator

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: AMANDA WALKER

Signed on: AUG 12, 2024 12:01 PM

Name: HILCORP ENERGY COMPANY

Title: Operations/Regulatory Technician

Street Address: 1111 TRAVIS ST

City: HOUSTON **State:** TX

Phone: (346) 237-2177

Email address: MWALKER@HILCORP.COM

Field

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

BLM Point of Contact

BLM POC Name: KENNETH G RENNICK

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5055647742

BLM POC Email Address: krennick@blm.gov

Disposition: Approved

Disposition Date: 08/21/2024

Signature: Kenneth Rennick

Form 3160-5
(June 2019)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2021

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE *- Other instructions on page 2*

5. Lease Serial No.

6. If Indian, Allottee or Tribe Name

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

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

8. Well Name and No.

2. Name of Operator

9. API Well No.

3a. Address

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

10. Field and Pool or Exploratory Area

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)*

11. Country or Parish, State

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be perfonned or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has detennined that the site is ready for final inspection.)

14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)*

Title

Signature

Date

THE SPACE FOR FEDERAL OR STATE OFICE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice 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.

Office

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.

(Instructions on page 2)

Additional Information

Location of Well

0. SHL: NWNW / 285 FNL / 590 FWL / TWSP: 30N / RANGE: 7W / SECTION: 23 / LAT: 36.80446 / LONG: -107.54646 (TVD: 0 feet, MD: 0 feet)

BHL: NWNW / 285 FNL / 590 FWL / TWSP: 30N / SECTION: / LAT: 36.80446 / LONG: 107.54646 (TVD: 0 feet, MD: 0 feet)

GENERAL REQUIREMENTS FOR PERMANENT ABANDONMENT OF WELLS ON FEDERAL AND INDIAN LEASES FARMINGTON FIELD OFFICE

1.0 The approved plugging plans may contain variances from the following minimum general requirements.

1.1 Modification of the approved plugging procedure is allowed only with the prior approval of the Authorized Officer, Farmington Field Office.

1.2 Requirements may be added to address specific well conditions.

2.0 Materials used must be accurately measured. (densometer/scales)

3.0 A tank or lined pit must be used for containment of any fluids from the wellbore during plugging operations and all pits are to be fenced with woven wire. These pits will be fenced on three sides and once the rig leaves location, the fourth side will be fenced.

3.1 Pits are not to be used for disposal of any hydrocarbons. If hydrocarbons are present in the pit, the fluids must be removed prior to filling in.

4.0 All cement plugs are to be placed through a work string. Cement may be bull-headed down the casing with prior approval. Cement caps on top of bridge plugs or cement retainers may be placed by dump bailer.

4.1 The cement shall be as specified in the approved plugging plan.

4.2 All cement plugs placed inside casing shall have sufficient volume to fill a minimum of 100' of the casing, or annular void(s) between casings, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug.

4.3 Surface plugs may be no less than 50' in length.

4.4 All cement plugs placed to fill annular void(s) between casing and the formation shall be of sufficient volume to fill a minimum of 100' of the annular space plus 100% excess, calculated using the bit size, or 100' of annular capacity, determined from a caliper log, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug.

4.5 All cement plugs placed to fill an open hole shall be of sufficient volume to fill a minimum of 100' of hole, as calculated from a caliper log, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug. In the absence of a caliper log, an excess of 100% shall be required.

4.6 **A cement bond log or other accepted cement evaluation tool is required to be run if one had not been previously ran or cement did not circulate to surface during the original casing cementing job or subsequent cementing jobs.**

5.0 All cement plugs spotted across, or above, any exposed zone(s), when; the wellbore is not full of fluid or the fluid level will not remain static, and in the case of lost circulation or partial returns during cement placement, shall be tested by tagging with the work string.

5.1 The top of any cement plug verified by tagging must be at or above the depth specified in the approved plan, without regard to any excess.

5.2 Testing will not be required for any cement plug that is mechanically contained by use of a bridge plug and/or cement retainer, if casing integrity has been established.

5.3 Any cement plug which is the only isolating medium, for a fresh water interval or a zone containing a prospectively valuable deposit of minerals, shall be tested by tagging.

5.4 If perforations are required below the surface casing shoe, a 30 minute minimum wait time will be required to determine if gas and/or water flows are present. If flow is present, the well will be shut-in for a minimum of one hour and the pressure recorded. Short or long term venting may be necessary to evacuate trapped gas. If only a water flow occurs with no associated gas, shut well in and record the pressures. Contact the Engineer as it may be necessary to change the cement weight and additives.

6.0 Before setting any cement plugs the hole needs to be rolled. All wells are to be controlled by means of a fluid that is to be of a weight and consistency necessary to stabilize the wellbore. This fluid shall be left in place as filler between all plugs.

6.1 Drilling mud may be used as the wellbore fluid in open hole plugging operations.

6.2 The wellbore fluid used in cased holes shall be of sufficient weight to balance known pore pressures in all exposed formations.

7.0 A blowout preventer and related equipment (BOPE) shall be installed and tested prior to working in a wellbore with any exposed zone(s); (1) that are over pressured, (2) where the pressures are unknown, or (3) known to contain H_2S.

8.0 Within 30 days after plugging work is completed, file a Sundry Notice, Subsequent Report of Abandonment (Form 3160-5), through the Automated Fluid Minerals Support System (AFMSS) with the Field Manager, Bureau of Land Management, 6251 College Blvd., Suite A, Farmington, NM 87402. The report should show the manner in which the plugging work was carried out, the extent, by depth(s), of cement plugs placed, and the size and location, by depth(s), of casing left in the well. Show date well was plugged.

9.0 All permanently abandoned wells are to be marked with a permanent monument as specified in 43 CFR 3162.6(d). Unless otherwise approved.

10.0 If this well is located in a Specially Designated Area (SDA), compliance with the appropriate seasonal closure requirements will be necessary.

All of the above are minimum requirements. Failure to comply with the above conditions of approval may result in an assessment for noncompliance and/or a Shut-in Order being issued pursuant to 43 CFR 3163.1. You are further advised that any instructions, orders or decisions issued by the Bureau of Land Management are subject to administrative review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4 and 43 CFR 4.700.

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Farmington District Office
6251 College Boulevard, Suite A
Farmington, New Mexico 87402
http://www.blm.gov/nm

August 21, 2024

CONDITIONS OF APPROVAL

Sundry Notice of Intent ID # 2804386
Request to Sidetrack

Operator: Hilcorp Energy Company
Lease: NMSF079382

Well(s): San Juan 30-6 Unit SWD 2, API # 30-039-24518
Location: NWNW Sec 23 T30N R7W (Rio Arriba County, NM)

CONDITIONS OF APPROVAL

1. Plugback operations authorized are subject to the attached "General Requirements for Permanent Abandonment of Wells on Federal and Indian Lease."

2. The following modifications to your plugback program are to be made:
   a. Increase cement length for the isolation plugs. A minimum of 170 feet for the Gallup, a minimum of 180 feet for the Dakota.

3. Farmington Office is to be notified at least 24 hours before the plugback operations commence at (505) 564 7750.

4. For all setting of new casing string, submit a report online through AFMSS 2. Show size and depth of hole, grade and weight of casing, depth set, depth of 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.

You are also required to place cement excesses per 4.2 and 4.4 of the attached General Requirements.
Office Hours: 7:45 a.m. to 4:30 p.m.

K. Rennick 08/21/2024

San Juan County, New Mexico San Juan 30-6 Unit 2 Sidetrack

Hilcorp Energy Company

Technical Drilling Plan (Rev. 1)

Hilcorp Energy Company proposes to re-enter, drill and complete the referenced horizontal well sidetrack targeting a Mancos shale seam in the Mancos formation.

Note: This technical drilling plan will be adjusted based upon actual conditions.

1. Location

Date:	June 28, 2024	Pool:	Basin Mancos
Well Name:	San Juan 30-6 Unit #2	Ground Elevation (ft. MSL):	6,267’
API	30-039-24518		
Surface Hole Location:	36.804520° N, -107.546721° W	Total Measured Depth (ft.)	16,228’
Bottom Hole Location:	36.802706° N, -107.513505° W	County, State:	San Juan County, NM

Note: All depths in the directional drilling plan are referenced from an estimated RKB datum of 17’ above ground level.

2. Geological Markers

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

Formation	Depth (ft. TVD)	Remarks
Ojo Alamo	2,108’	Water (fresh/useable)
Kirtland	2,231’	None
Fruitland	2,927’	Gas, Water
Pictured Cliffs	3,155’	Possible Gas
Cliffhouse	5,055’	Possible Gas & Water
Menefee	5,189’	None
Point Lookout	5,394’	Gas
Mancos	5,759’	Gas
Greenhorn	7,396	Gas

3. Pressure Control Equipment

See attached BOP equipment and choke manifold schematics for a diagram of pressure control equipment.

- BOP equipment will be nippled up on top of the wellhead after surface casing is set and cemented.
- Pressure control configurations will be designed to meet the minimum 3M standards.
- All equipment will have a minimum of 3M pressure rating and will be rated for 8,000’ (TVD).
- A rotating head will be installed on top of the annular as seen in the attached diagram.
- BOP Testing: The BOPE will be tested to 250 psi (Low) for 5 minutes and 3,000 psi (High) for 10 minutes. Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. BOP equipment will be tested upon installation, every 30 days, and after any repairs are made to the BOP equipment. Annular preventors will be functionally tested at least once per week. Pipe and blind rams will be function tested each trip. The New Mexico Oil & Gas Conservation Division and the BLM will be notified 24 hours in advance of testing BOPE. All tests and inspections will be recorded and logged with time and results.

4. Casing & Cement Program

1. Proposed/Current Casing Program:

Proposed Casing Design					
Casing String	Hole Size	Casing Size	Weight/Grade	Top Depth (MD/TVD)	Shoe Depth (MD/TVD)
Surface (existing)	24"	20"	133# K55 STC	0'	498' / 498'
Intermediate 1 (existing)	17-1/2"	13-3/8"	68# K55 STC	0'	3,561' / 3,561'
Intermediate 2 (existing)	12-1/4"	9-5/8"	40# N80 BTC	3,421'	5,859' / 5,859'
Production (existing)	8-3/4"	7"	23# N80 LTC.	0'	8,923' / 8,923'
Production (proposed)	6-1/4"	4-1/2"	13.5# P110 (or equiv.) BTC.	0'	16,228' / 6,630'

Proposed Casing Design Safety Factors					
Casing String	Casing Description	Burst Design SF	Collapse Design SF	Joint Tensile Design SF	Connection Tensile Design SF
Production	4-1/2" 13.5# P110 BTC	1.3	1.4	4.7	4.7

Notes:

- Production casing will be run from surface to TD.
- If the 6-1/4" hole is not drilled to the total planned measured depth, the production liner setting depth and length will be adjusted accordingly.
- Casing Design Parameters – Designed for full evacuation. Mud Weights used for calculations: Surface = 9.0 ppg, Intermediate = 11.5 ppg, Production = 12.0 ppg. Burst: 1.15; Collapse: 1.125; Tensile: 1.6.
    - Burst: (Casing Burst Rating) / (Maximum Burst Load (Max MW x TVD x .052))
    - Collapse: (Full hydrostatic of MW in annulus) – (Hydrostatic of vacated casing, 0.1 psi/ft)
    - Tensile: (Tensile rating) / (measured depth x casing weight)
- A toe initiation sliding sleeve will be installed at the toe of the production casing.

2. Proposed Centralizer Program:

Proposed Centralizer Program	
Interval	Centralizers & Placement
Production	Centralizers determined by hole conditions from TD to top of cement.

3. Proposed Cement Program:

Proposed Cement Design							
Interval	Depth (ft. MD)	Lead/Tail	Volume (ft^3)	Sacks	Slurry	Density	Planned TOC
Production	16,228'	Lead	1,264 ft^3	932	BondCem Cement – 10% Excess 0.3% Super CBL, 0.1% HR-601 1.356 ft^3/sk – 6.08 gal/sk	13.3 ppg	5,000'

5. Drilling Fluids Program

1. Proposed Drilling Fluids Program:

Proposed Drilling Fluids Program					
Interval	Fluid Type	Density	Fluid Loss	Invert Ratio	Depth
		(ppg)	(mL/30 min)	(%Diesel / %Brine)	(ft. MD)
Production	Oil Base Mud	10.0 – 12.0	6 – 8	70/30 – 75/25	5,900' – 16,228'

Notes:

- In the 6-1/4" production section, oil base mud will be utilized which will be an invert mud. The base fluid will be diesel. Brine fluid will be $CaCl_2$ or KCl.
- Lost circulation material may be added to the mud systems to manage fluid losses as hole conditions dictate.
- The well will be drilled utilizing a closed-loop circulating system. Drill cuttings will be transported to an approved disposal site.
- Estimated total volume of drill cuttings for disposal: 189 bbls (1,062 ft^3).

6. Estimated Pressures & Drilling Hazards

1. Estimated Pressures

- Estimated Reservoir Pressure of Mancos Shale target: 4,000 – 4,200 psi
- No over-pressured intervals expected (aside from Mancos Shale target).
- There is production from the Fruitland Coal, Mesa Verde and Pictured Cliffs formations in offset wells in the area, which could result in these formations being depleted.

2. Water Flows

- No water flows are expected.

3. Lost Circulation

- Lost circulation is possible in the lateral section. Losses will be mitigated by adding LCM to the mud system.

4. Hydrogen Sulfide

- No hydrogen sulfide is expected to be encountered based on nearby well production.

7. Testing, Logging, Coring

1. Mud Logging

- Mud loggers will collect formation samples every 30'-90' from the casing window to TD of the production hole.

2. MWD

- Measurement while drilling tools will be utilized from the casing window to the TD of the production hole to measure and record inclination and azimuth.

3. LWD

- Logging while drilling tools (gamma ray) will be utilized while drilling the production section from the intermediate casing window to the production hole section TD to assist in staying in the desired zone while drilling the lateral section.

4. Open Hole Logging

- There are no planned open hole logs post drilling.

5. Coring

- There is no coring or formation testing planned.

8. Directional Drilling Plan

- The directional drilling plan and plot are attached.
- The directional plan is built from geologic targets from offset wells and lease boundaries. The production hole section will be landed and drilled horizontally within the target formation utilizing LWD tools to steer the wellbore. On-site adjustments to the directional plan will be made and formation and wellbore dictate.
- A whipstock will be utilized to exit the existing production casing.

9. Pre-Drill Preparation Procedure

1. RU slickline, clear tubing to verify that it free of equipment that could become mobile while pulling. Set a 3-slip stop, if necessary

2. MIRU workover rig and associated equipment; NU and test BOP per HEC, State, and Federal guidelines.

3. Release production packer, TOOH with 4-1/2" tubing & Packer and lay down string.

4. WL set a 7" bridge plug at +/- 7,921' to isolate the Morrison perforations.

5. Dump bail 50' of cement on top of bridge plug.

6. RU pressure test truck. Perform a Mechanical Integrity Test on wellbore. Chart record the MIT test (Notify NMOCD/BLM 24hr before actual test).

7. Pump a 100' balanced cement plug from +/- 7,546' – 7,646' to isolate the Dakota formation.

8. Pump a 100' balanced cement plug from +/- 6,076' – 6,176' to isolate the Gallup formation.

9. Set a 7" bridge plug @ ~5,900' for base of whipstock plug. Depth may be adjusted slightly to avoid cutting window across a casing connection.

10. NDNU dry hole tree, RDMO workover rig.

10. Completion

1. Pressure Testing

- A pressure test of the 4-1/2" production casing will be conducted to the maximum allowable frac pressure for 30 minutes.

- Pressure will be cycled to shift the toe sleeve open.

2. Stimulation

- The well will be stimulated with sand and water. The number of stages and amount of proppant used will be adjusted based on actual lateral length and real-time pumping conditions during the stimulation.

- Individual stages will be perforated on wireline and isolated using frac plugs or dissolvable frac plugs.

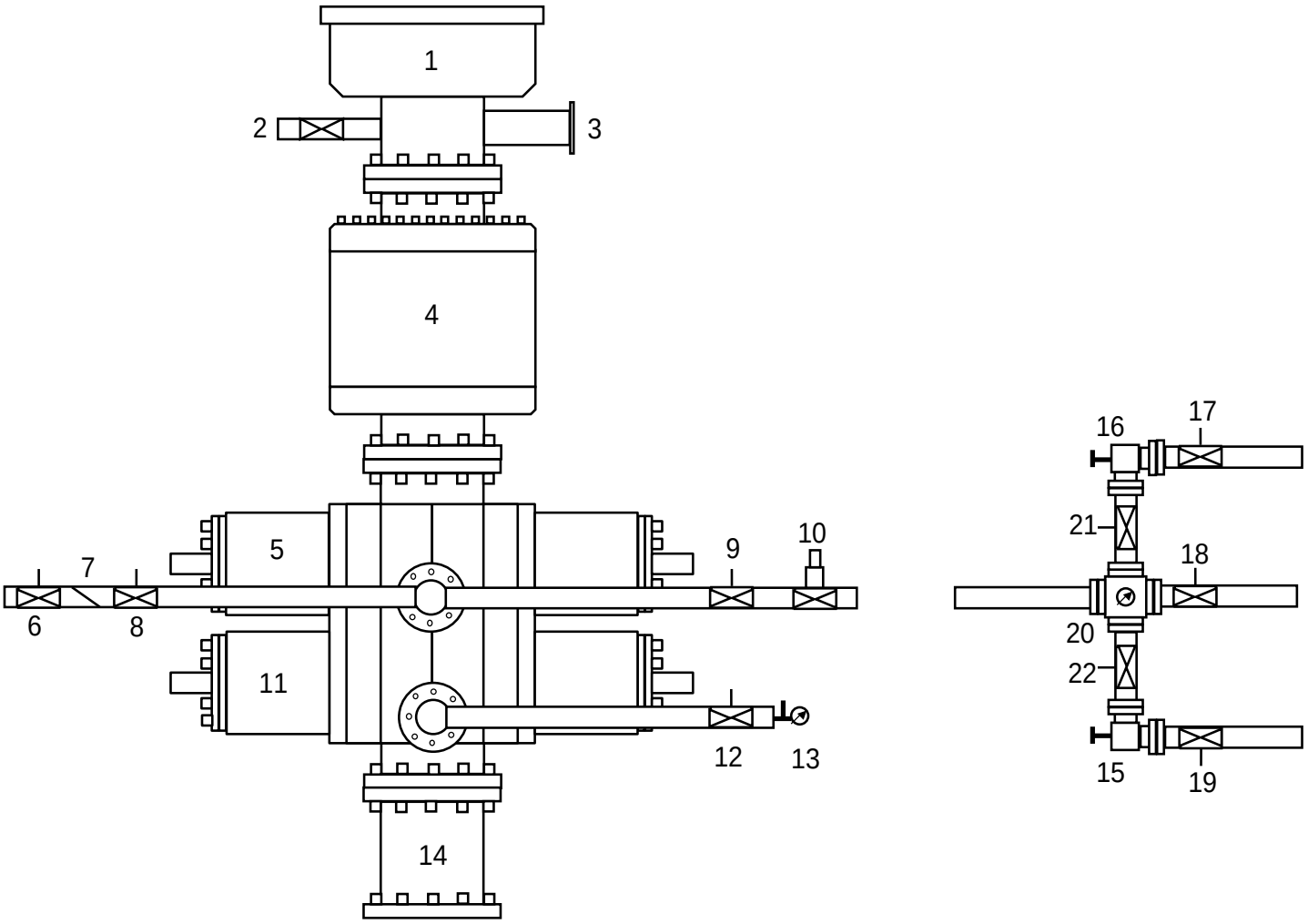
- Upon completion of the stimulation operation, frac plugs will be drilled out and the stimulation fluid will be flowed back.

*NOTE: Although this horizontal well may be drilled past the applicable setbacks, an unorthodox location application is not required because the completed interval in this well, as defined by 19.15.16.7 8(1) NMAC, will be entirely within the applicable setbacks. This

approach complies with all applicable rules, including 19.15.16.14 A(3) NMAC, 19.15.16.14 8(2) NMAC, 19.15.16.15 8(2)NMAC, and 19.15.16.15 8(4) NMAC.

Appendix A

Pressure Control Equipment Configuration

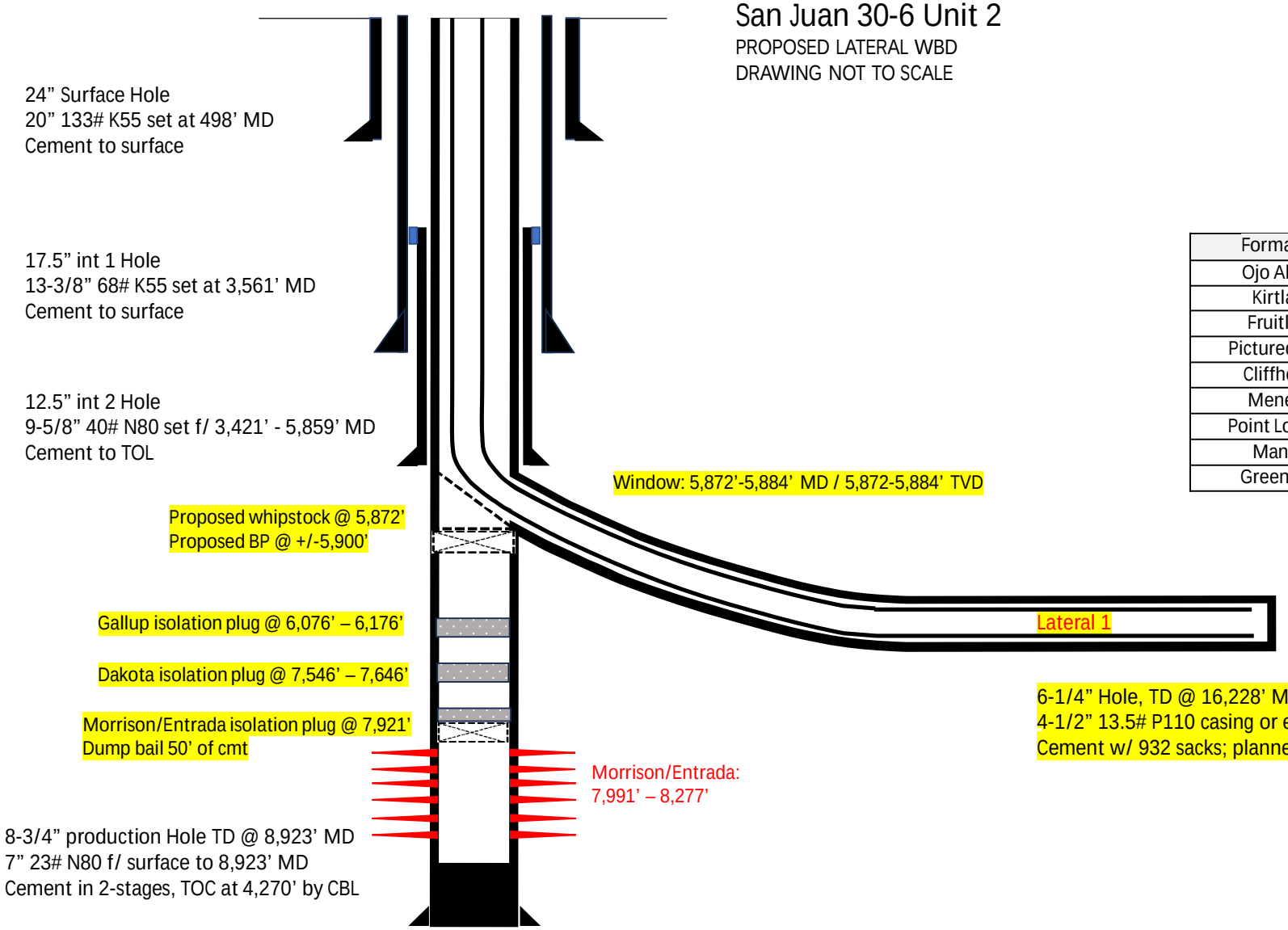


1	Rotating Head	12	Manual Isolation Valve
2	Flow Line	13	Needle Valve & Pressure Gauge
3	Fill-Up Line	14	Spacer Spool (if needed)
4	3M Annular Preventer	15	Manual Choke
5	3M Pipe Rams	16	Manual Choke
6	Manual Isolation Valve	17	Manual Isolation Valve
7	Check Valve	18	Manual Isolation Valve
8	Manual Isolation Valve	19	Manual Isolation Valve
9	Manual Isolation Valve	20	Valve Block & Pressure Gauge
10	High Closing Ratio Valve	21	Manual Isolation Valve
11	3M Blind Rams	22	Manual Isolation Valve

San Juan 30-6 Unit 2

PROPOSED LATERAL WBD
DRAWING NOT TO SCALE

State:	NM
County:	San Juan
API:	3003924518
GL:	6,267’
KB:	12’



Formation	Depth (ft. TVD)
Ojo Alamo	2,108’
Kirtland	2,231’
Fruitland	2,927’
Pictured Cliffs	3,155’
Cliffhouse	5,055’
Menefee	5,189’
Point Lookout	5,394’
Mancos	5,759’
Greenhorn	7,396

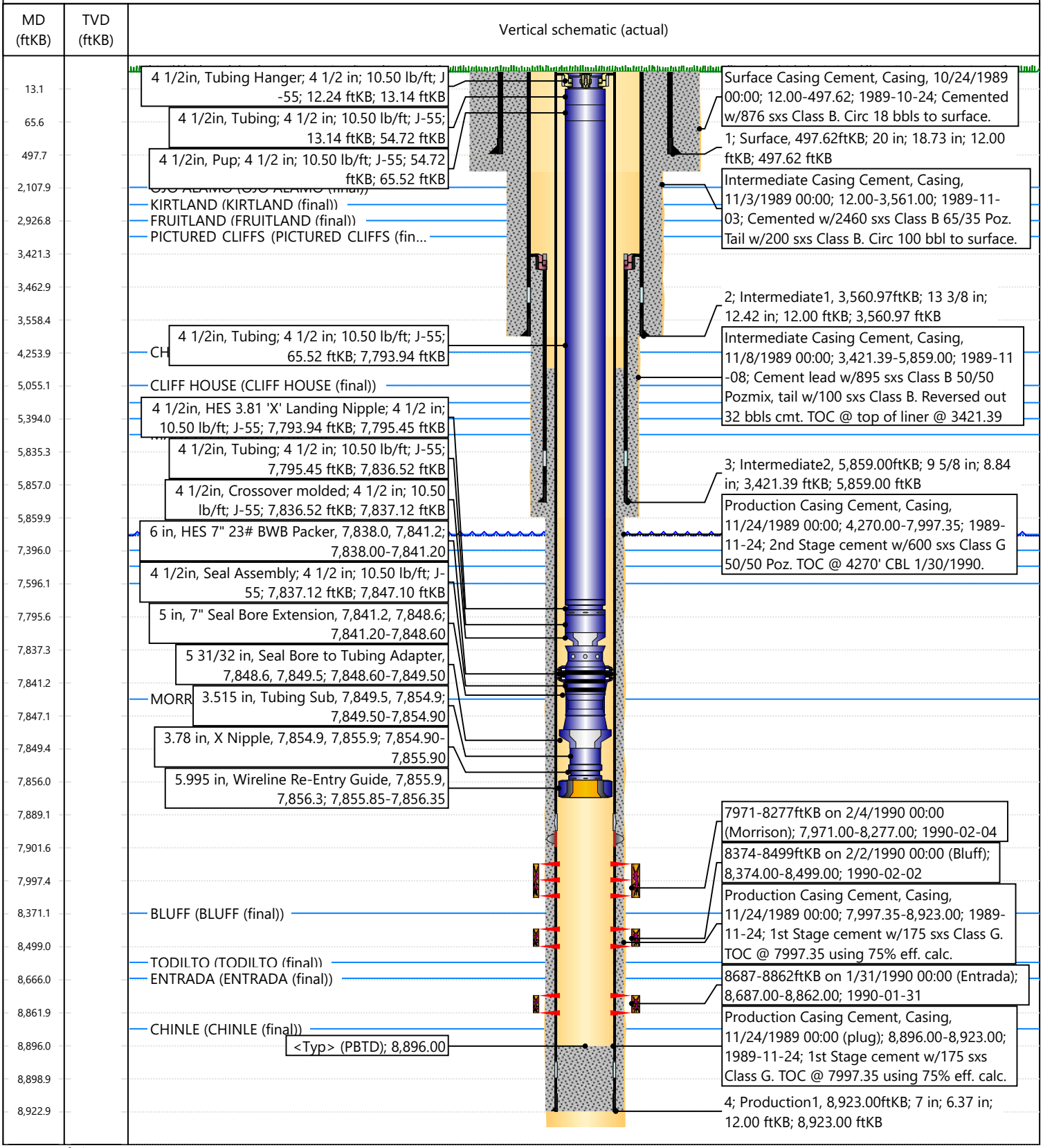
Hilcorp Energy Company

Current Schematic - Version 3

Well Name: SAN JUAN 30-6 UNIT #2 SWD

API / UWI	Surface Legal Location	Field Name	Route	State/Province	Well Configuration Type
3003924518	023-030N-007W-D	MORRISON BLUFF ENTRADA #3779	1100	NEW MEXICO	
Ground Elevation (ft)	**Original KB/RT Elevation (ft)**	**Tubing Hanger Elevation (ft)**	**RKB to GL (ft)**	**KB-Casing Flange Distance (ft)**	**KB-Tubing Hanger Distance (ft)**
6,263.00	6,275.00		12.00		

Original Hole



C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024 Submittal Type: ☒ Initial Submittal ☐ Amended Report ☐ As Drilled

WELL LOCATION INFORMATION

API Number	Pool Code	Pool Name
30-039-24518	97232	BASIN MANCOS

Property Code	Property Name	Well Number
	SAN JUAN 30-6 UNIT SWD	2

OGRID No.	Operator Name	Ground Level Elevation
372171	HILCORP ENERGY COMPANY	6267'

Surface Owner: ☐ State ☒ Fee ☐ Tribal ☐ Federal

Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal

Surface Location

UL	Section	Township	Range	Lot	Feet from N/S Line	Feet from E/W Line	Latitude	Longitude	County
D	23	30N	7W		306' NORTH	578' WEST	36.804526 °N	-107.547328 °W	RIO ARRIBA

Bottom Hole Location

UL	Section	Township	Range	Lot	Feet from N/S Line	Feet from E/W Line	Latitude	Longitude	County
A	24	30N	7W		968' NORTH	241' EAST	36.802712 °N	-107.514110 °W	RIO ARRIBA

Dedicated Acres	Penetrated Spacing Unit:	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit	Consolidation Code
640.00	N/2 - Section 23, T30N, R7W N/2 - Section 24, T30N, R7W			☐ Yes ☒ No	

Order Numbers

Well setbacks are under Common Ownership: ☒ Yes ☐ No

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet from N/S Line	Feet from E/W Line	Latitude	Longitude	County
D	23	30N	7W		306' NORTH	578' WEST	36.804526 °N	-107.547328 °W	RIO ARRIBA

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet from N/S Line	Feet from E/W Line	Latitude	Longitude	County
D	23	30N	7W		306' NORTH	578' WEST	36.804526 °N	-107.547328 °W	RIO ARRIBA

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet from N/S Line	Feet from E/W Line	Latitude	Longitude	County
A	24	30N	7W		968' NORTH	241' EAST	36.802712 °N	-107.514110 °W	RIO ARRIBA

Unitized Area or Area of Uniform Interest	Spacing Unit Type	Ground Floor Elevation
SAN JUAN 30-6 UNIT	☒ Horizontal ☐ Vertical ☐ Directional	6267'

OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, 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 a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.

Signature

9/4/2024
Date

Amanda Walker
Printed Name

mwalker@hilcorp.com
E-mail Address

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.

JASON C. EDWARDS
NEW MEXICO
15269
9/4/2024
REGISTERED PROFESSIONAL SURVEYOR

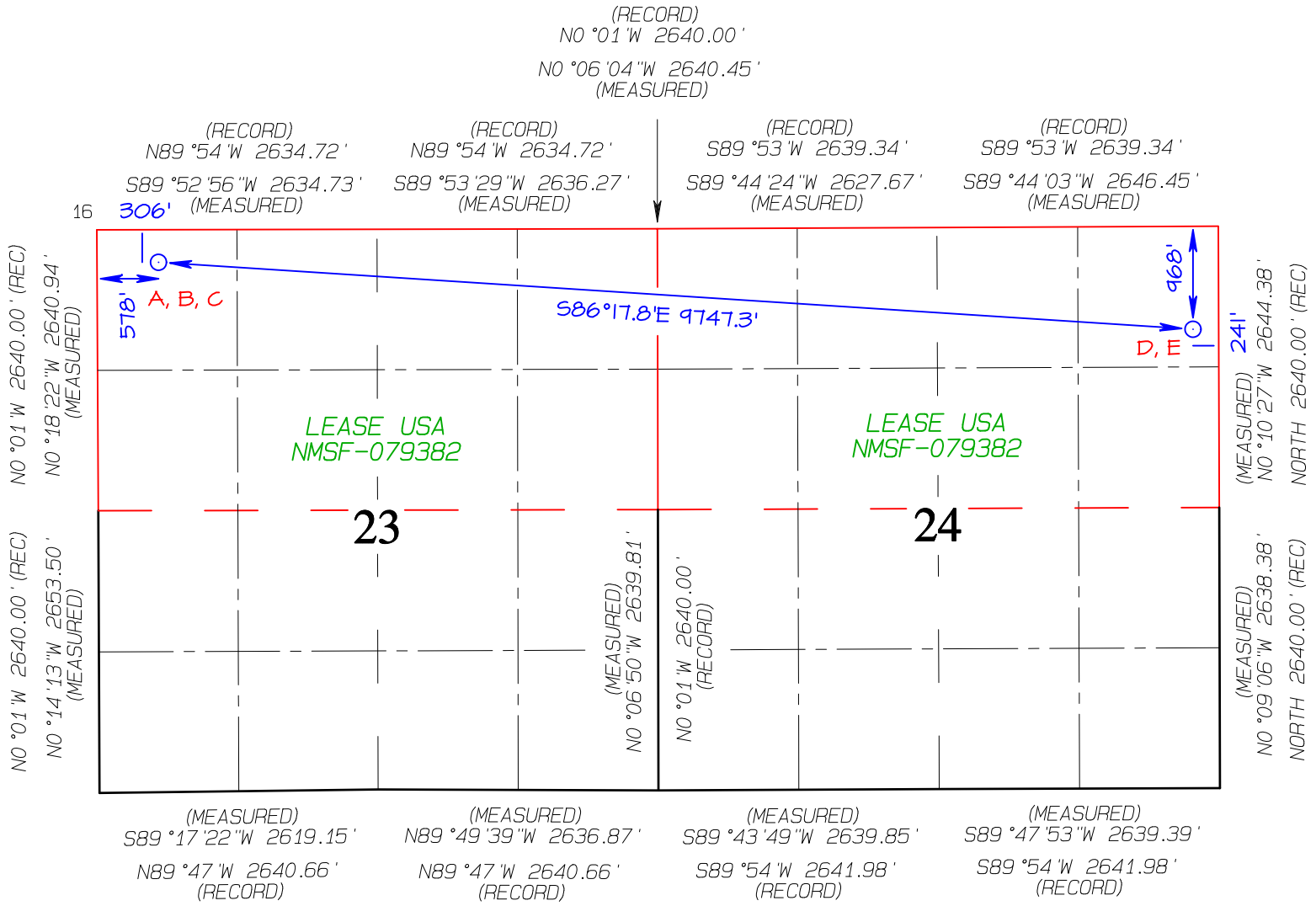
JASON C. EDWARDS

Signature and Seal of Professional Surveyor

Certificate Number	Date of Survey
15269	MAY 13, 2024

Note: 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.

SURFACE LOCATION (A)	KICK OFF POINT (B)	FIRST TAKE POINT (C)	LAST TAKE POINT (D)	BOTTOM HOLE LOCATION (E)
306' FNL 578' FWL	306' FNL 578' FWL	306' FNL 578' FWL	968' FNL 241' FEL	968' FNL 241' FEL
SEC 23, T30N, R7W	SEC 23, T30N, R7W	SEC 23, T30N, R7W	SEC 24, T30N, R7W	SEC 24, T30N, R7W
LAT 36.804520 °N	LAT 36.804520 °N	LAT 36.804520 °N	LAT 36.802706 °N	LAT 36.802706 °N
LONG -107.546721 °W	LONG -107.546721 °W	LONG -107.546721 °W	LONG -107.513505 °W	LONG -107.513505 °W
DATUM: NAD1927	DATUM: NAD1927	DATUM: NAD1927	DATUM: NAD1927	DATUM: NAD1927
LAT 36.804526 °N	LAT 36.804526 °N	LAT 36.804526 °N	LAT 36.802712 °N	LAT 36.802712 °N
LONG -107.547328 °W	LONG -107.547328 °W	LONG -107.547328 °W	LONG -107.514110 °W	LONG -107.514110 °W
DATUM: NAD1983	DATUM: NAD1983	DATUM: NAD1983	DATUM: NAD1983	DATUM: NAD1983



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
30-039-24518	97232	BASIN MANCOS

[4] Property Code	[5] Property Name	[6] Well Number
318716	SAN JUAN 30-6 UNIT SWD	2

[7] OGRID No.	[8] Operator Name	[9] Elevation
372171	HILCORP ENERGY COMPANY	6267'

[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
D	23	30N	7W		306	NORTH	578	WEST	RIO ARRIBA

[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
A	24	30N	7W		968	NORTH	241	EAST	RIO ARRIBA

[12] Dedicated Acres		[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
640.00	N/2 - Section 23 N/2 - Section 24			

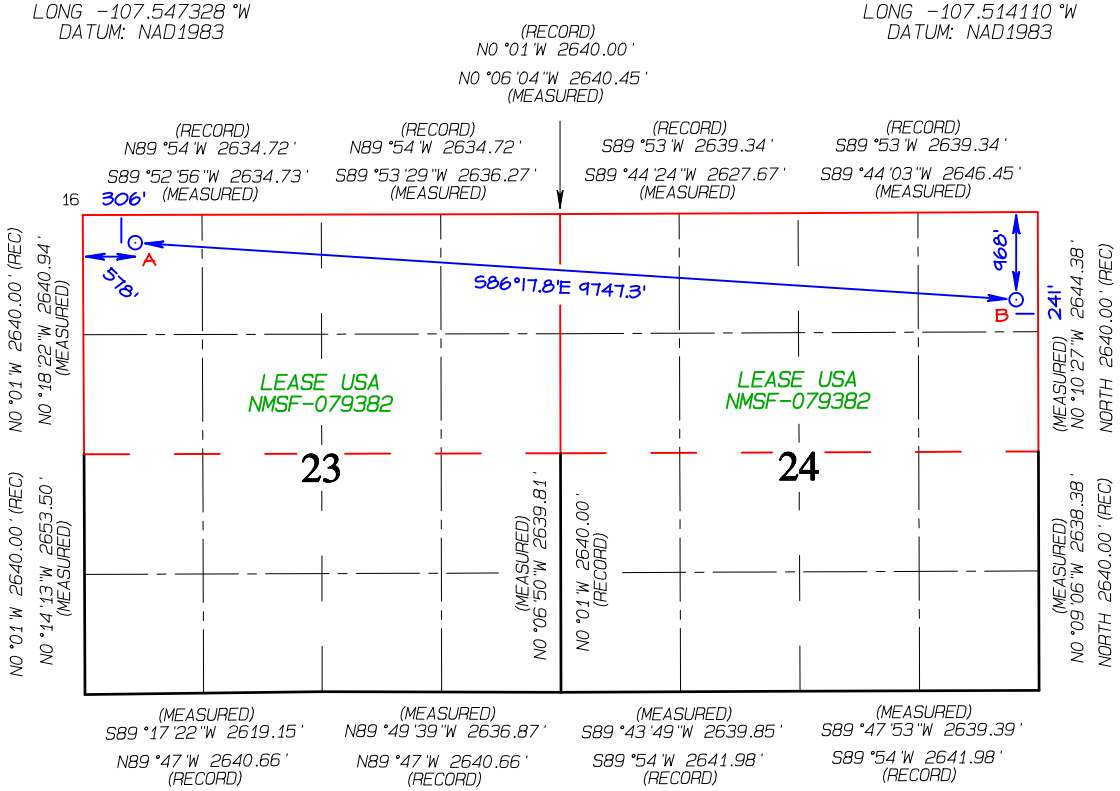
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

SURFACE LOCATION (A)
306' FNL 578' FWL
SEC 23, T30N, R7W
LAT 36.804520 °N
LONG -107.546721 °W
DATUM: NAD1927

LAT 36.804526 °N
LONG -107.547328 °W
DATUM: NAD1983

END OF LATERAL (B)
968' FNL 241' FEL
SEC 24, T30N, R7W
LAT 36.802706 °N
LONG -107.513505 °W
DATUM: NAD1927

LAT 36.802712 °N
LONG -107.514110 °W
DATUM: NAD1983



[17] OPERATOR CERTIFICATION

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

Signature — Date: 7/2/2024

Amanda Walker
Printed Name

mwalker@hilcorp.com
E-mail Address

[18] SURVEYOR CERTIFICATION

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

Date Revised: MAY 16, 2024
Date of Survey: MAY 13, 2024

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
NEW MEXICO
15269
REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS
Certificate Number 15269

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:** 7/2/2024

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 MCF/D	Anticipated Produced Water BBL/D
SJ 30-6 Unit 2	30-039-24518	D-23-30N-07W	285 FNL & 590' FWL	0 bopd	13,000 mmcfd	800 bwpd

IV. Central Delivery Point Name: Ignacio 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
SJ 30-6 Unit 2	**30-039-24518**					

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: 7/2/2024
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.

Company: HilCorp
Project: Rio Arriba, NM NAD27
Site: San Juan 30-6 Unit 2
Well: San Juan 30-6 Unit 2
Wellbore: ST1
Design: Plan #2

PROJECT DETAILS: Rio Arriba, 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

WELL DETAILS: San Juan 30-6 Unit 2

GL 6267' @ 6267.00usft

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	2112230.08	1583909.02	36.8045200	-107.5467210

Plan: Plan #2 (San Juan 30-6 Unit 2/ST1)

Created By: Janie Collins Date: 15:59, May 23 2024

Azimuths to True North
Magnetic North: 8.

Magnetic F
Strength: 49261.
Dip Angle: 63.
Date: 5/23/2
Model: HDGM2024

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SJ 30-6 Unit 2 BHL	6630.00	-658.59	9724.76	2111600.64	593635.71	36.8027063	-107.5135047

SECTION DETAILS

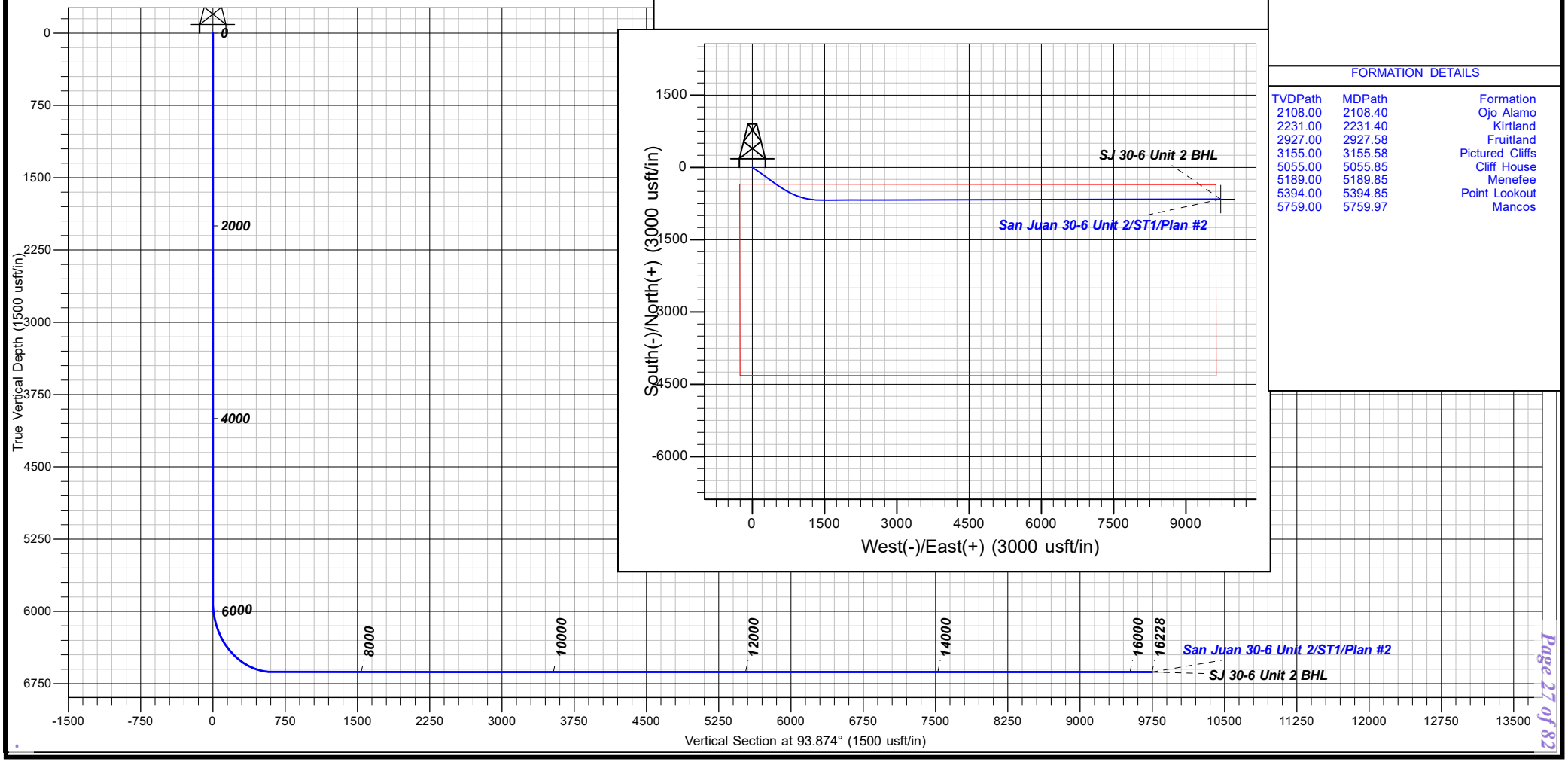
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
5900.00	0.00	0.000	5898.97	0.00	0.00	0.00	0.00	0.00
7048.30	90.00	125.000	6630.00	-419.30	598.83	7.84	125.00	625.79
7926.71	90.00	89.864	6630.00	-678.34	1423.82	4.00	-90.00	1466.40
16227.67	90.00	89.864	6630.00	-658.59	9724.76	0.00	0.00	9747.03

CASING DETAILS

No casing data is available

FORMATION DETAILS

TVDPath	MDPath	Formation
2108.00	2108.40	Ojo Alamo
2231.00	2231.40	Kirtland
2927.00	2927.58	Fruitland
3155.00	3155.58	Pictured Cliffs
5055.00	5055.85	Cliff House
5189.00	5189.85	Menefee
5394.00	5394.85	Point Lookout
5759.00	5759.97	Mancos



HilCorp

Rio Arriba, NM NAD27
San Juan 30-6 Unit 2
San Juan 30-6 Unit 2

ST1

Plan: Plan #2

Standard Planning Report

23 May, 2024

Hilcorp

Lonestar Consulting, LLC

Planning Report

LONESTAR CONSULTING

Database:	EDMDB	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Company:	HilCorp	**TVD Reference:**	GL 6267' @ 6267.00usft
Project:	Rio Arriba, NM NAD27	**MD Reference:**	GL 6267' @ 6267.00usft
Site:	San Juan 30-6 Unit 2	**North Reference:**	True
Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	ST1		
Design:	Plan #2		

Project Rio Arriba, 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 San Juan 30-6 Unit 2

Site Position:		**Northing:**	2,112,230.0861 usft	**Latitude:**	36.8045200
From:	Lat/Long	**Easting:**	583,909.0246 usft	**Longitude:**	-107.5467210
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "		

Well San Juan 30-6 Unit 2

Well Position	**+N/-S**	0.00 usft	**Northing:**	2,112,230.0861	usft	**Latitude:**	36.8045200
	+E/-W	0.00 usft	**Easting:**	583,909.0246	usft	**Longitude:**	-107.5467210
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		usft	**Ground Level:**	6,267.00 usft
Grid Convergence:		0.17 °					

Wellbore ST1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2024	5/23/2024	8.52	63.17	49,261.70000000

Design Plan #2

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	5,900.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	93.874

Plan Survey Tool Program **Date** 5/23/2024

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	5,900.00	16,227.12	Plan #2 (ST1)	MWD+HDGM	
				OWSG MWD + HDGM	

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
5,900.00	0.00	0.000	5,898.97	0.00	0.00	0.00	0.00	0.00	0.00	
7,048.30	90.00	125.000	6,630.00	-419.30	598.83	7.84	7.84	0.00	125.00	
7,926.71	90.00	89.864	6,630.00	-678.34	1,423.82	4.00	0.00	-4.00	-90.00	
16,227.67	90.00	89.864	6,630.00	-658.59	9,724.76	0.00	0.00	0.00	0.00	SJ 30-6 Unit 2 BHL

Hilcorp

Lonestar Consulting, LLC

Planning Report

LONESTAR CONSULTING

Database:	EDMDB	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Company:	HilCorp	**TVD Reference:**	GL 6267' @ 6267.00usft
Project:	Rio Arriba, NM NAD27	**MD Reference:**	GL 6267' @ 6267.00usft
Site:	San Juan 30-6 Unit 2	**North Reference:**	True
Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	ST1		
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)
5,900.00	0.00	0.000	5,898.97	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	7.84	125.000	5,998.65	-3.92	5.59	5.85	7.84	7.84	0.00
6,100.00	15.68	125.000	6,096.48	-15.59	22.27	23.27	7.84	7.84	0.00
6,200.00	23.51	125.000	6,190.62	-34.81	49.72	51.96	7.84	7.84	0.00
6,300.00	31.35	125.000	6,279.30	-61.22	87.43	91.37	7.84	7.84	0.00
6,400.00	39.19	125.000	6,360.88	-94.31	134.69	140.76	7.84	7.84	0.00
6,500.00	47.03	125.000	6,433.83	-133.48	190.63	199.21	7.84	7.84	0.00
6,600.00	54.86	125.000	6,496.79	-177.98	254.19	265.63	7.84	7.84	0.00
6,700.00	62.70	125.000	6,548.58	-227.00	324.19	338.78	7.84	7.84	0.00
6,800.00	70.54	125.000	6,588.23	-279.61	399.32	417.30	7.84	7.84	0.00
6,900.00	78.38	125.000	6,615.01	-334.82	478.18	499.71	7.84	7.84	0.00
7,000.00	86.21	125.000	6,628.40	-391.62	559.29	584.47	7.84	7.84	0.00
7,048.30	90.00	125.000	6,630.00	-419.30	598.83	625.79	7.84	7.84	0.00
7,100.00	90.00	122.932	6,630.00	-448.19	641.70	670.52	4.00	0.00	-4.00
7,200.00	90.00	118.932	6,630.00	-499.58	727.46	759.55	4.00	0.00	-4.00
7,300.00	90.00	114.932	6,630.00	-544.86	816.60	851.55	4.00	0.00	-4.00
7,400.00	90.00	110.932	6,630.00	-583.82	908.68	946.05	4.00	0.00	-4.00
7,500.00	90.00	106.932	6,630.00	-616.25	1,003.25	1,042.59	4.00	0.00	-4.00
7,600.00	90.00	102.932	6,630.00	-642.02	1,099.85	1,140.72	4.00	0.00	-4.00
7,700.00	90.00	98.932	6,630.00	-660.98	1,198.02	1,239.94	4.00	0.00	-4.00
7,800.00	90.00	94.932	6,630.00	-673.04	1,297.27	1,339.78	4.00	0.00	-4.00
7,900.00	90.00	90.932	6,630.00	-678.16	1,397.11	1,439.74	4.00	0.00	-4.00
7,926.71	90.00	89.864	6,630.00	-678.34	1,423.82	1,466.40	4.00	0.00	-4.00
8,000.00	90.00	89.864	6,630.00	-678.17	1,497.11	1,539.51	0.00	0.00	0.00
8,100.00	90.00	89.864	6,630.00	-677.93	1,597.11	1,639.27	0.00	0.00	0.00
8,200.00	90.00	89.864	6,630.00	-677.69	1,697.11	1,739.02	0.00	0.00	0.00
8,300.00	90.00	89.864	6,630.00	-677.46	1,797.11	1,838.78	0.00	0.00	0.00
8,400.00	90.00	89.864	6,630.00	-677.22	1,897.11	1,938.53	0.00	0.00	0.00
8,500.00	90.00	89.864	6,630.00	-676.98	1,997.11	2,038.29	0.00	0.00	0.00
8,600.00	90.00	89.864	6,630.00	-676.74	2,097.11	2,138.04	0.00	0.00	0.00
8,700.00	90.00	89.864	6,630.00	-676.50	2,197.11	2,237.80	0.00	0.00	0.00
8,800.00	90.00	89.864	6,630.00	-676.27	2,297.11	2,337.56	0.00	0.00	0.00
8,900.00	90.00	89.864	6,630.00	-676.03	2,397.11	2,437.31	0.00	0.00	0.00
9,000.00	90.00	89.864	6,630.00	-675.79	2,497.11	2,537.07	0.00	0.00	0.00
9,100.00	90.00	89.864	6,630.00	-675.55	2,597.11	2,636.82	0.00	0.00	0.00
9,200.00	90.00	89.864	6,630.00	-675.31	2,697.11	2,736.58	0.00	0.00	0.00
9,300.00	90.00	89.864	6,630.00	-675.08	2,797.11	2,836.33	0.00	0.00	0.00
9,400.00	90.00	89.864	6,630.00	-674.84	2,897.11	2,936.09	0.00	0.00	0.00
9,500.00	90.00	89.864	6,630.00	-674.60	2,997.11	3,035.84	0.00	0.00	0.00
9,600.00	90.00	89.864	6,630.00	-674.36	3,097.11	3,135.60	0.00	0.00	0.00
9,700.00	90.00	89.864	6,630.00	-674.12	3,197.11	3,235.35	0.00	0.00	0.00
9,800.00	90.00	89.864	6,630.00	-673.89	3,297.11	3,335.11	0.00	0.00	0.00
9,900.00	90.00	89.864	6,630.00	-673.65	3,397.11	3,434.86	0.00	0.00	0.00
10,000.00	90.00	89.864	6,630.00	-673.41	3,497.11	3,534.62	0.00	0.00	0.00
10,100.00	90.00	89.864	6,630.00	-673.17	3,597.11	3,634.37	0.00	0.00	0.00
10,200.00	90.00	89.864	6,630.00	-672.93	3,697.11	3,734.13	0.00	0.00	0.00
10,300.00	90.00	89.864	6,630.00	-672.70	3,797.11	3,833.88	0.00	0.00	0.00
10,400.00	90.00	89.864	6,630.00	-672.46	3,897.11	3,933.64	0.00	0.00	0.00
10,500.00	90.00	89.864	6,630.00	-672.22	3,997.11	4,033.39	0.00	0.00	0.00
10,600.00	90.00	89.864	6,630.00	-671.98	4,097.11	4,133.15	0.00	0.00	0.00
10,700.00	90.00	89.864	6,630.00	-671.75	4,197.11	4,232.90	0.00	0.00	0.00
10,800.00	90.00	89.864	6,630.00	-671.51	4,297.10	4,332.66	0.00	0.00	0.00
10,900.00	90.00	89.864	6,630.00	-671.27	4,397.10	4,432.41	0.00	0.00	0.00
11,000.00	90.00	89.864	6,630.00	-671.03	4,497.10	4,532.17	0.00	0.00	0.00

Hilcorp

Lonestar Consulting, LLC

Planning Report

LONESTAR CONSULTING

Database:	EDMDB	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Company:	HilCorp	**TVD Reference:**	GL 6267' @ 6267.00usft
Project:	Rio Arriba, NM NAD27	**MD Reference:**	GL 6267' @ 6267.00usft
Site:	San Juan 30-6 Unit 2	**North Reference:**	True
Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	ST1		
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)
11,100.00	90.00	89.864	6,630.00	-670.79	4,597.10	4,631.92	0.00	0.00	0.00
11,200.00	90.00	89.864	6,630.00	-670.56	4,697.10	4,731.68	0.00	0.00	0.00
11,300.00	90.00	89.864	6,630.00	-670.32	4,797.10	4,831.43	0.00	0.00	0.00
11,400.00	90.00	89.864	6,630.00	-670.08	4,897.10	4,931.19	0.00	0.00	0.00
11,500.00	90.00	89.864	6,630.00	-669.84	4,997.10	5,030.94	0.00	0.00	0.00
11,600.00	90.00	89.864	6,630.00	-669.60	5,097.10	5,130.70	0.00	0.00	0.00
11,700.00	90.00	89.864	6,630.00	-669.37	5,197.10	5,230.45	0.00	0.00	0.00
11,800.00	90.00	89.864	6,630.00	-669.13	5,297.10	5,330.21	0.00	0.00	0.00
11,900.00	90.00	89.864	6,630.00	-668.89	5,397.10	5,429.96	0.00	0.00	0.00
12,000.00	90.00	89.864	6,630.00	-668.65	5,497.10	5,529.72	0.00	0.00	0.00
12,100.00	90.00	89.864	6,630.00	-668.41	5,597.10	5,629.47	0.00	0.00	0.00
12,200.00	90.00	89.864	6,630.00	-668.18	5,697.10	5,729.23	0.00	0.00	0.00
12,300.00	90.00	89.864	6,630.00	-667.94	5,797.10	5,828.98	0.00	0.00	0.00
12,400.00	90.00	89.864	6,630.00	-667.70	5,897.10	5,928.74	0.00	0.00	0.00
12,500.00	90.00	89.864	6,630.00	-667.46	5,997.10	6,028.49	0.00	0.00	0.00
12,600.00	90.00	89.864	6,630.00	-667.22	6,097.10	6,128.25	0.00	0.00	0.00
12,700.00	90.00	89.864	6,630.00	-666.99	6,197.10	6,228.00	0.00	0.00	0.00
12,800.00	90.00	89.864	6,630.00	-666.75	6,297.10	6,327.76	0.00	0.00	0.00
12,900.00	90.00	89.864	6,630.00	-666.51	6,397.10	6,427.51	0.00	0.00	0.00
13,000.00	90.00	89.864	6,630.00	-666.27	6,497.10	6,527.27	0.00	0.00	0.00
13,100.00	90.00	89.864	6,630.00	-666.04	6,597.10	6,627.02	0.00	0.00	0.00
13,200.00	90.00	89.864	6,630.00	-665.80	6,697.10	6,726.78	0.00	0.00	0.00
13,300.00	90.00	89.864	6,630.00	-665.56	6,797.10	6,826.53	0.00	0.00	0.00
13,400.00	90.00	89.864	6,630.00	-665.32	6,897.10	6,926.29	0.00	0.00	0.00
13,500.00	90.00	89.864	6,630.00	-665.08	6,997.10	7,026.05	0.00	0.00	0.00
13,600.00	90.00	89.864	6,630.00	-664.85	7,097.10	7,125.80	0.00	0.00	0.00
13,700.00	90.00	89.864	6,630.00	-664.61	7,197.10	7,225.56	0.00	0.00	0.00
13,800.00	90.00	89.864	6,630.00	-664.37	7,297.10	7,325.31	0.00	0.00	0.00
13,900.00	90.00	89.864	6,630.00	-664.13	7,397.10	7,425.07	0.00	0.00	0.00
14,000.00	90.00	89.864	6,630.00	-663.89	7,497.10	7,524.82	0.00	0.00	0.00
14,100.00	90.00	89.864	6,630.00	-663.66	7,597.10	7,624.58	0.00	0.00	0.00
14,200.00	90.00	89.864	6,630.00	-663.42	7,697.10	7,724.33	0.00	0.00	0.00
14,300.00	90.00	89.864	6,630.00	-663.18	7,797.09	7,824.09	0.00	0.00	0.00
14,400.00	90.00	89.864	6,630.00	-662.94	7,897.09	7,923.84	0.00	0.00	0.00
14,500.00	90.00	89.864	6,630.00	-662.70	7,997.09	8,023.60	0.00	0.00	0.00
14,600.00	90.00	89.864	6,630.00	-662.47	8,097.09	8,123.35	0.00	0.00	0.00
14,700.00	90.00	89.864	6,630.00	-662.23	8,197.09	8,223.11	0.00	0.00	0.00
14,800.00	90.00	89.864	6,630.00	-661.99	8,297.09	8,322.86	0.00	0.00	0.00
14,900.00	90.00	89.864	6,630.00	-661.75	8,397.09	8,422.62	0.00	0.00	0.00
15,000.00	90.00	89.864	6,630.00	-661.51	8,497.09	8,522.37	0.00	0.00	0.00
15,100.00	90.00	89.864	6,630.00	-661.28	8,597.09	8,622.13	0.00	0.00	0.00
15,200.00	90.00	89.864	6,630.00	-661.04	8,697.09	8,721.88	0.00	0.00	0.00
15,300.00	90.00	89.864	6,630.00	-660.80	8,797.09	8,821.64	0.00	0.00	0.00
15,400.00	90.00	89.864	6,630.00	-660.56	8,897.09	8,921.39	0.00	0.00	0.00
15,500.00	90.00	89.864	6,630.00	-660.33	8,997.09	9,021.15	0.00	0.00	0.00
15,600.00	90.00	89.864	6,630.00	-660.09	9,097.09	9,120.90	0.00	0.00	0.00
15,700.00	90.00	89.864	6,630.00	-659.85	9,197.09	9,220.66	0.00	0.00	0.00
15,800.00	90.00	89.864	6,630.00	-659.61	9,297.09	9,320.41	0.00	0.00	0.00
15,900.00	90.00	89.864	6,630.00	-659.37	9,397.09	9,420.17	0.00	0.00	0.00
16,000.00	90.00	89.864	6,630.00	-659.14	9,497.09	9,519.92	0.00	0.00	0.00
16,100.00	90.00	89.864	6,630.00	-658.90	9,597.09	9,619.68	0.00	0.00	0.00
16,200.00	90.00	89.864	6,630.00	-658.66	9,697.09	9,719.43	0.00	0.00	0.00
16,227.67	90.00	89.864	6,630.00	-658.59	9,724.76	9,747.03	0.00	0.00	0.00

Hilcorp

Lonestar Consulting, LLC
Planning Report

LONESTAR CONSULTING

Database:	EDMDB	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Company:	HilCorp	**TVD Reference:**	GL 6267' @ 6267.00usft
Project:	Rio Arriba, NM NAD27	**MD Reference:**	GL 6267' @ 6267.00usft
Site:	San Juan 30-6 Unit 2	**North Reference:**	True
Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	ST1		
Design:	Plan #2		

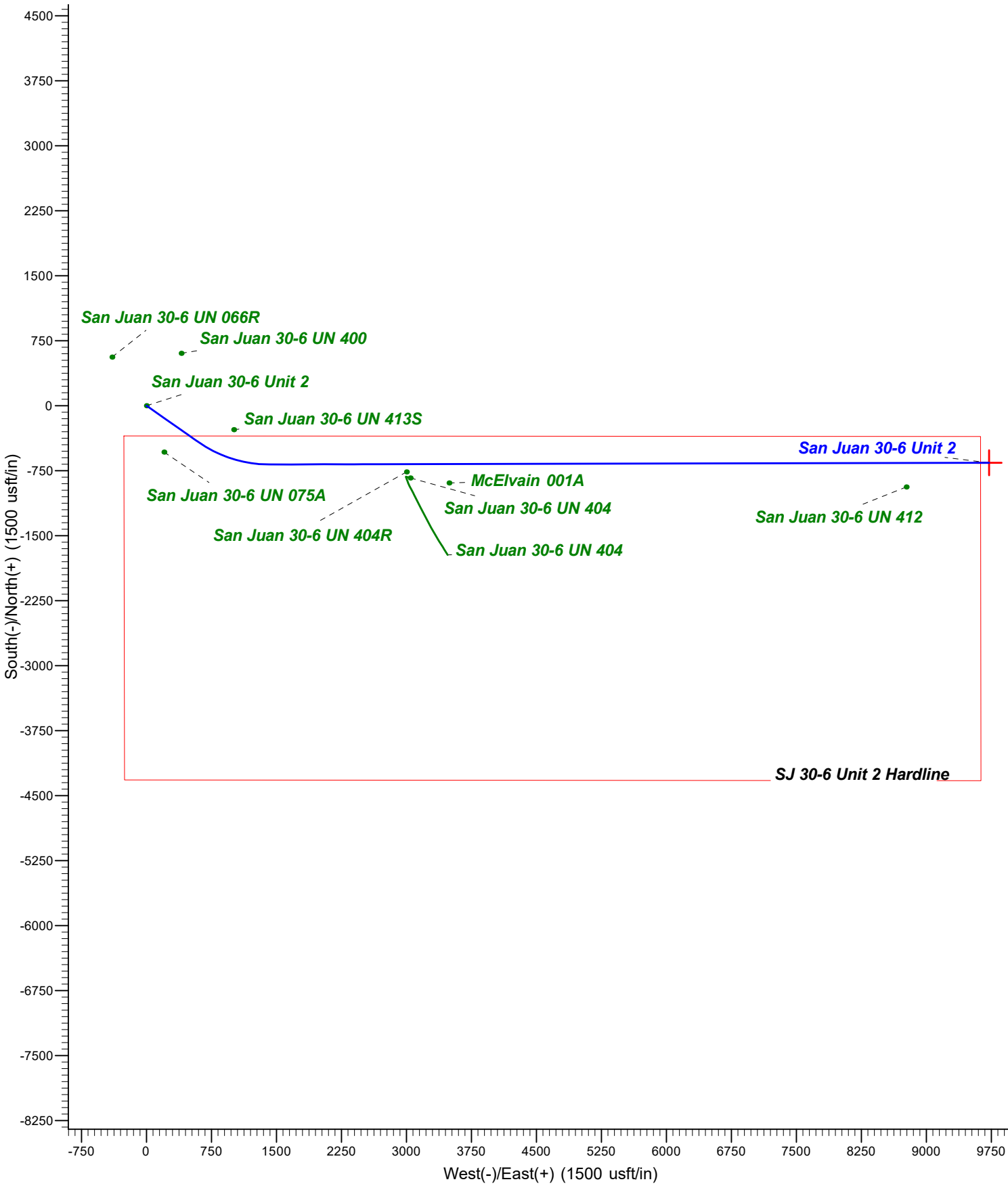
Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SJ 30-6 Unit 2 BHL - plan hits target center - Point	0.00	0.000	6,630.00	-658.59	9,724.76	2,111,600.6408	593,635.7101	36.8027063	-107.5135047

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,108.40	2,108.00	Ojo Alamo		0.00	0.000
2,231.40	2,231.00	Kirtland		0.00	0.000
2,927.58	2,927.00	Fruitland		0.00	0.000
3,155.58	3,155.00	Pictured Cliffs		0.00	0.000
5,055.85	5,055.00	Cliff House		0.00	0.000
5,189.85	5,189.00	Menefee		0.00	0.000
5,394.85	5,394.00	Point Lookout		0.00	0.000
5,759.97	5,759.00	Mancos		0.00	0.000

Company: HilCorp
Project: Rio Arriba, NM NAD27
Site: San Juan 30-6 Unit 2
Well: San Juan 30-6 Unit 2



16:02, May 23 2024
Created By: Janie Collins

HilCorp

Rio Arriba, NM NAD27
San Juan 30-6 Unit 2
San Juan 30-6 Unit 2

ST1
Plan #2

Anticollision Report

23 May, 2024

Lonestar Consulting, LLC

Anticollision Report

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
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 + Stations Interval 100.00usft	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum centre distance of 10,000.00usft	**Error Surface:**	Pedal Curve
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 5/23/2024

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
122.00	5,900.00	Survey #1 - INC Only (OH)	INCLINOMETER	Inclination Only : < 3 degrees
5,900.00	16,227.12	Plan #2 (ST1)	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
San Juan 30-6 Unit 2						
McElvain 001A - OH - OH	9,995.45	5,485.00	1,029.40	930.45	10.403	CC
McElvain 001A - OH - OH	10,300.00	5,485.00	1,073.51	922.25	7.097	ES
McElvain 001A - OH - OH	11,000.00	5,485.00	1,438.33	1,146.40	4.927	SF
San Juan 30-6 UN 066R - OH - OH	3,274.19	3,289.32	687.45	488.14	3.449	CC
San Juan 30-6 UN 066R - OH - OH	5,900.00	5,900.00	687.54	329.24	1.919	Collision Risk Procedures Re
San Juan 30-6 UN 075A - OH - OH	5,151.84	5,187.08	570.58	256.61	1.817	Collision Risk Procedures Re
San Juan 30-6 UN 075A - OH - OH	5,900.00	5,925.00	572.21	213.17	1.594	Collision Risk Procedures Re
San Juan 30-6 UN 400 - OH - OH	2,007.69	2,019.87	725.41	603.11	5.932	CC
San Juan 30-6 UN 400 - OH - OH	3,199.99	3,180.00	725.81	532.16	3.748	ES, SF
San Juan 30-6 UN 404 - OH - OH	2,892.32	2,824.20	3,156.09	2,983.76	18.315	CC
San Juan 30-6 UN 404 - OH - OH	3,271.00	3,734.00	3,158.83	2,960.98	15.966	ES
San Juan 30-6 UN 404 - OH - OH	3,899.99	3,734.00	3,240.98	3,029.52	15.327	SF
San Juan 30-6 UN 404 - ST1 - ST1	2,560.73	2,446.00	3,104.64	3,024.07	38.535	CC
San Juan 30-6 UN 404 - ST1 - ST1	2,690.00	2,476.00	3,106.84	3,022.34	36.768	ES
San Juan 30-6 UN 404 - ST1 - ST1	4,199.99	2,689.00	3,453.26	3,333.67	28.877	SF
San Juan 30-6 UN 404R - OH - OH	2,489.29	2,374.93	3,096.52	2,948.80	20.963	CC
San Juan 30-6 UN 404R - OH - OH	3,271.00	3,033.00	3,099.47	2,908.18	16.203	ES
San Juan 30-6 UN 404R - OH - OH	3,899.99	3,033.00	3,187.13	2,982.52	15.577	SF
San Juan 30-6 UN 412 - OH - OH	12,049.50	3,530.00	4,747.70	4,547.43	23.706	SF
San Juan 30-6 UN 412 - OH - OH	15,300.00	3,530.00	3,487.52	3,403.40	41.460	CC, ES
San Juan 30-6 UN 413S - OH - OH	863.14	858.78	1,044.24	992.31	20.110	CC
San Juan 30-6 UN 413S - OH - OH	3,271.00	3,220.00	1,045.76	849.20	5.320	ES
San Juan 30-6 UN 413S - OH - OH	3,299.99	3,220.00	1,047.46	850.34	5.314	SF
San Juan 30-6 Unit 2 - OH - OH	6,200.00	6,189.78	61.28	51.66	6.365	CC, ES, SF

Offset Design: San Juan 30-6 Unit 2 - McElvain 001A - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 100-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)	Rule Assigned: Distance Between Centres (usft)	Rule Assigned: Distance Between Ellipses (usft)	Rule Assigned: Minimum Separation (usft)	Rule Assigned: Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	104.32	-891.71	3,493.07	3,607.77				
100.00	100.00	0.00	0.00	3.04	0.00	104.32	-891.71	3,493.07	3,605.30	3,602.27	3.04	1,187.143	
122.00	122.00	0.00	0.00	3.70	0.00	104.32	-891.71	3,493.07	3,605.13	3,601.43	3.71	973.003	

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

Lonestar Consulting, LLC

Anticollision Report

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - McElvain 001A - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 100-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)	Rule Assigned: Distance Between Centres (usft)	Rule Assigned: Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
155.25	155.25	16.25	16.25	4.71	0.65	104.32	-891.71	3,493.07	3,605.09	3,599.73	5.36	672.023	
200.00	200.00	61.00	61.00	6.07	2.44	104.32	-891.71	3,493.07	3,605.09	3,596.58	8.51	423.452	
300.00	300.00	161.00	161.00	9.11	6.44	104.32	-891.71	3,493.07	3,605.09	3,589.54	15.55	231.837	
353.00	352.97	213.97	213.97	10.72	8.56	104.32	-891.71	3,493.07	3,605.09	3,585.82	19.28	187.002	
400.00	399.97	260.97	260.97	12.15	10.44	104.32	-891.71	3,493.07	3,605.09	3,582.51	22.59	159.620	
473.00	472.93	333.93	333.93	14.36	13.36	104.32	-891.71	3,493.07	3,605.09	3,577.37	27.72	130.051	
500.00	499.93	360.93	360.93	15.18	14.44	104.32	-891.71	3,493.07	3,605.09	3,575.47	29.62	121.709	
600.00	599.93	460.93	460.93	18.22	18.44	104.32	-891.71	3,493.07	3,605.09	3,568.44	36.66	98.346	
700.00	699.93	560.93	560.93	21.26	22.44	104.32	-891.71	3,493.07	3,605.09	3,561.40	43.69	82.508	
800.00	799.93	660.93	660.93	24.29	26.44	104.32	-891.71	3,493.07	3,605.09	3,554.36	50.73	71.063	
836.00	835.85	696.85	696.85	25.39	27.87	104.32	-891.71	3,493.07	3,605.09	3,551.83	53.26	67.687	
900.00	899.85	760.85	760.85	27.33	30.43	104.32	-891.71	3,493.07	3,605.09	3,547.33	57.76	62.410	
1,000.00	999.85	860.85	860.85	30.37	34.43	104.32	-891.71	3,493.07	3,605.09	3,540.29	64.80	55.633	
1,100.00	1,099.85	960.85	960.85	33.40	38.43	104.32	-891.71	3,493.07	3,605.09	3,533.26	71.84	50.184	
1,200.00	1,199.85	1,060.85	1,060.85	36.44	42.43	104.32	-891.71	3,493.07	3,605.09	3,526.22	78.87	45.707	
1,300.00	1,299.85	1,160.85	1,160.85	39.48	46.43	104.32	-891.71	3,493.07	3,605.09	3,519.18	85.91	41.963	
1,327.00	1,326.73	1,187.73	1,187.73	40.30	47.51	104.32	-891.71	3,493.07	3,605.09	3,517.29	87.81	41.057	
1,400.00	1,399.73	1,260.73	1,260.73	42.51	50.43	104.32	-891.71	3,493.07	3,605.09	3,512.15	92.94	38.788	
1,500.00	1,499.73	1,360.73	1,360.73	45.55	54.43	104.32	-891.71	3,493.07	3,605.09	3,505.11	99.98	36.058	
1,600.00	1,599.73	1,460.73	1,460.73	48.59	58.43	104.32	-891.71	3,493.07	3,605.09	3,498.08	107.02	33.687	
1,700.00	1,699.73	1,560.73	1,560.73	51.62	62.43	104.32	-891.71	3,493.07	3,605.09	3,491.04	114.05	31.609	
1,761.00	1,760.60	1,621.60	1,621.60	53.48	64.86	104.32	-891.71	3,493.07	3,605.09	3,486.75	118.34	30.464	
1,800.00	1,799.60	1,660.60	1,660.60	54.66	66.42	104.32	-891.71	3,493.07	3,605.09	3,484.01	121.09	29.773	
1,900.00	1,899.60	1,760.60	1,760.60	57.70	70.42	104.32	-891.71	3,493.07	3,605.09	3,476.97	128.12	28.138	
2,000.00	1,999.60	1,860.60	1,860.60	60.74	74.42	104.32	-891.71	3,493.07	3,605.09	3,469.93	135.16	26.673	
2,100.00	2,099.60	1,960.60	1,960.60	63.77	78.42	104.32	-891.71	3,493.07	3,605.09	3,462.90	142.20	25.353	
2,200.00	2,199.60	2,060.60	2,060.60	66.81	82.42	104.32	-891.71	3,493.07	3,605.09	3,455.86	149.23	24.158	
2,259.00	2,258.51	2,119.51	2,119.51	68.60	84.78	104.32	-891.71	3,493.07	3,605.09	3,451.71	153.38	23.504	
2,300.00	2,299.50	2,160.50	2,160.50	69.85	86.42	104.32	-891.71	3,493.07	3,605.09	3,448.83	156.27	23.070	
2,400.00	2,399.50	2,260.50	2,260.50	72.88	90.42	104.32	-891.71	3,493.07	3,605.09	3,441.79	163.30	22.076	
2,500.00	2,499.50	2,360.50	2,360.50	75.92	94.42	104.32	-891.71	3,493.07	3,605.09	3,434.75	170.34	21.164	
2,599.99	2,599.50	2,460.50	2,460.50	78.96	98.42	104.32	-891.71	3,493.07	3,605.09	3,427.72	177.38	20.325	
2,690.00	2,689.42	2,550.42	2,550.42	81.69	102.02	104.32	-891.71	3,493.07	3,605.09	3,421.39	183.71	19.624	
2,699.99	2,699.42	2,560.42	2,560.42	81.99	102.42	104.32	-891.71	3,493.07	3,605.09	3,420.68	184.41	19.549	
2,799.99	2,799.42	2,660.42	2,660.42	85.03	106.42	104.32	-891.71	3,493.07	3,605.09	3,413.65	191.45	18.831	
2,899.99	2,899.42	2,760.42	2,760.42	88.07	110.42	104.32	-891.71	3,493.07	3,605.09	3,406.61	198.48	18.163	
2,999.99	2,999.42	2,860.42	2,860.42	91.10	114.42	104.32	-891.71	3,493.07	3,605.09	3,399.57	205.52	17.541	
3,099.99	3,099.42	2,960.42	2,960.42	94.14	118.42	104.32	-891.71	3,493.07	3,605.09	3,392.54	212.56	16.961	
3,199.99	3,199.42	3,060.42	3,060.42	97.18	122.42	104.32	-891.71	3,493.07	3,605.09	3,385.50	219.59	16.417	
3,271.00	3,270.31	3,131.31	3,131.31	99.33	125.25	104.32	-891.71	3,493.07	3,605.09	3,380.51	224.59	16.052	
3,299.99	3,299.30	3,160.30	3,160.30	100.21	126.41	104.32	-891.71	3,493.07	3,605.09	3,378.47	226.63	15.908	
3,399.99	3,399.30	3,260.30	3,260.30	103.25	130.41	104.32	-891.71	3,493.07	3,605.09	3,371.43	233.66	15.429	
3,499.99	3,499.30	3,360.30	3,360.30	106.29	134.41	104.32	-891.71	3,493.07	3,605.09	3,364.39	240.70	14.978	
3,517.00	3,516.25	3,377.25	3,377.25	106.80	135.09	104.32	-891.71	3,493.07	3,605.09	3,363.20	241.89	14.904	
3,599.99	3,599.25	3,460.25	3,460.25	109.32	138.41	104.32	-891.71	3,493.07	3,605.09	3,357.36	247.73	14.552	
3,699.99	3,699.25	3,560.25	3,560.25	112.36	142.41	104.32	-891.71	3,493.07	3,605.09	3,350.32	254.77	14.150	
3,799.99	3,799.24	3,660.24	3,660.24	115.40	146.41	104.32	-891.71	3,493.07	3,605.09	3,343.29	261.81	13.770	
3,899.99	3,899.24	3,760.24	3,760.24	118.44	150.41	104.32	-891.71	3,493.07	3,605.09	3,336.25	268.85	13.410	
3,942.00	3,941.19	3,802.19	3,802.19	119.71	152.09	104.32	-891.71	3,493.07	3,605.09	3,333.29	271.80	13.264	
3,999.99	3,999.18	3,860.18	3,860.18	121.47	154.41	104.32	-891.71	3,493.07	3,605.09	3,329.21	275.88	13.068	
4,099.99	4,099.18	3,960.18	3,960.18	124.51	158.41	104.32	-891.71	3,493.07	3,605.09	3,322.18	282.92	12.743	
4,199.99	4,199.18	4,060.18	4,060.18	127.55	162.41	104.32	-891.71	3,493.07	3,605.09	3,315.14	289.95	12.433	

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

Hilcorp

Lonestar Consulting, LLC

Anticollision Report

LONESTAR CONSULTING

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - McElvain 001A - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 100-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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,299.99	4,299.18	4,160.18	4,160.18	130.58	166.41	104.32	-891.71	3,493.07	3,605.09	3,308.10	296.99	12.139	
4,399.99	4,399.18	4,260.18	4,260.18	133.62	170.41	104.32	-891.71	3,493.07	3,605.09	3,301.07	304.03	11.858	
4,412.00	4,411.15	4,272.15	4,272.15	133.98	170.89	104.32	-891.71	3,493.07	3,605.09	3,300.22	304.87	11.825	
4,499.99	4,499.14	4,360.14	4,360.14	136.66	174.41	104.32	-891.71	3,493.07	3,605.09	3,294.03	311.06	11.590	
4,599.99	4,599.14	4,460.14	4,460.14	139.69	178.41	104.32	-891.71	3,493.07	3,605.09	3,286.99	318.10	11.333	
4,699.99	4,699.14	4,560.14	4,560.14	142.73	182.41	104.32	-891.71	3,493.07	3,605.09	3,279.96	325.14	11.088	
4,799.99	4,799.14	4,660.14	4,660.14	145.77	186.41	104.32	-891.71	3,493.07	3,605.09	3,272.92	332.17	10.853	
4,899.99	4,899.14	4,760.14	4,760.14	148.80	190.41	104.32	-891.71	3,493.07	3,605.09	3,265.88	339.21	10.628	
4,999.99	4,999.14	4,860.14	4,860.14	151.84	194.41	104.32	-891.71	3,493.07	3,605.09	3,258.85	346.25	10.412	
5,099.99	5,099.14	4,960.14	4,960.14	154.88	198.41	104.32	-891.71	3,493.07	3,605.09	3,251.81	353.28	10.205	
5,199.99	5,199.14	5,060.14	5,060.14	157.91	202.41	104.32	-891.71	3,493.07	3,605.09	3,244.77	360.32	10.005	
5,299.99	5,299.14	5,160.14	5,160.14	160.95	206.41	104.32	-891.71	3,493.07	3,605.09	3,237.74	367.36	9.814	
5,399.99	5,399.14	5,260.14	5,260.14	163.99	210.41	104.32	-891.71	3,493.07	3,605.09	3,230.70	374.39	9.629	
5,415.00	5,414.03	5,275.03	5,275.03	164.44	211.00	104.32	-891.71	3,493.07	3,605.09	3,229.65	375.44	9.602	
5,499.99	5,499.02	5,360.02	5,360.02	167.02	214.40	104.32	-891.71	3,493.07	3,605.09	3,223.67	381.43	9.452	
5,599.99	5,599.02	5,460.02	5,460.02	170.06	218.40	104.32	-891.71	3,493.07	3,605.09	3,216.63	388.46	9.280	
5,699.99	5,699.02	5,485.00	5,485.00	173.10	219.40	104.32	-891.71	3,493.07	3,605.87	3,213.46	392.41	9.189	
5,799.99	5,799.02	5,485.00	5,485.00	176.14	219.40	104.32	-891.71	3,493.07	3,609.34	3,214.27	395.07	9.136	
5,822.00	5,820.97	5,485.00	5,485.00	176.80	219.40	104.32	-891.71	3,493.07	3,610.47	3,214.86	395.61	9.126	
5,900.00	5,898.96	5,485.00	5,485.00	179.17	219.40	104.32	-891.71	3,493.07	3,615.56	3,218.14	397.42	9.098	
5,950.00	5,948.92	5,485.00	5,485.00	179.93	219.40	-20.61	-891.71	3,493.07	3,618.11	3,220.39	397.72	9.097	
6,000.00	5,998.65	5,485.00	5,485.00	179.93	219.40	-20.61	-891.71	3,493.07	3,618.15	3,220.97	397.19	9.109	
6,050.00	6,047.91	5,485.00	5,485.00	179.93	219.40	-20.68	-891.71	3,493.07	3,615.69	3,219.11	396.58	9.117	
6,100.00	6,096.48	5,485.00	5,485.00	179.93	219.40	-20.81	-891.71	3,493.07	3,610.72	3,214.81	395.90	9.120	
6,150.00	6,144.12	5,485.00	5,485.00	179.94	219.40	-21.03	-891.71	3,493.07	3,603.26	3,208.10	395.15	9.119	
6,200.00	6,190.61	5,485.00	5,485.00	179.94	219.40	-21.31	-891.71	3,493.07	3,593.33	3,198.98	394.34	9.112	
6,250.00	6,235.74	5,485.00	5,485.00	179.94	219.40	-21.68	-891.71	3,493.07	3,580.95	3,187.48	393.47	9.101	
6,300.00	6,279.30	5,485.00	5,485.00	179.95	219.40	-22.13	-891.71	3,493.07	3,566.17	3,173.62	392.55	9.085	
6,350.00	6,321.08	5,485.00	5,485.00	179.95	219.40	-22.68	-891.71	3,493.07	3,549.01	3,157.44	391.57	9.064	
6,400.00	6,360.88	5,485.00	5,485.00	179.96	219.40	-23.33	-891.71	3,493.07	3,529.53	3,138.97	390.55	9.037	
6,450.00	6,398.52	5,485.00	5,485.00	179.98	219.40	-24.09	-891.71	3,493.07	3,507.77	3,118.27	389.50	9.006	
6,500.00	6,433.83	5,485.00	5,485.00	180.00	219.40	-24.98	-891.71	3,493.07	3,483.80	3,095.38	388.43	8.969	
6,550.00	6,466.64	5,485.00	5,485.00	180.02	219.40	-26.01	-891.71	3,493.07	3,457.69	3,070.36	387.34	8.927	
6,600.00	6,496.79	5,485.00	5,485.00	180.05	219.40	-27.21	-891.71	3,493.07	3,429.51	3,043.27	386.24	8.879	
6,650.00	6,524.14	5,485.00	5,485.00	180.09	219.40	-28.60	-891.71	3,493.07	3,399.34	3,014.20	385.14	8.826	
6,700.00	6,548.58	5,485.00	5,485.00	180.14	219.40	-30.20	-891.71	3,493.07	3,367.27	2,983.21	384.06	8.768	
6,750.00	6,569.97	5,485.00	5,485.00	180.20	219.40	-32.07	-891.71	3,493.07	3,333.40	2,950.39	383.01	8.703	
6,800.00	6,588.23	5,485.00	5,485.00	180.27	219.40	-34.24	-891.71	3,493.07	3,297.84	2,915.84	381.99	8.633	
6,850.00	6,603.26	5,485.00	5,485.00	180.35	219.40	-36.77	-891.71	3,493.07	3,260.69	2,879.66	381.03	8.558	
6,900.00	6,615.00	5,485.00	5,485.00	180.45	219.40	-39.72	-891.71	3,493.07	3,222.08	2,841.95	380.13	8.476	
6,950.00	6,623.39	5,485.00	5,485.00	180.55	219.40	-43.16	-891.71	3,493.07	3,182.14	2,802.84	379.30	8.389	
7,000.00	6,628.40	5,485.00	5,485.00	180.67	219.40	-47.18	-891.71	3,493.07	3,141.02	2,762.45	378.57	8.297	
7,048.30	6,629.99	5,485.00	5,485.00	180.79	219.40	-51.68	-891.71	3,493.07	3,100.30	2,722.34	377.96	8.203	
7,100.00	6,629.99	5,485.00	5,485.00	180.94	219.40	-49.50	-891.71	3,493.07	3,055.99	2,678.64	377.34	8.099	
7,200.00	6,629.99	5,485.00	5,485.00	181.25	219.40	-44.68	-891.71	3,493.07	2,968.90	2,592.86	376.05	7.895	
7,300.00	6,629.99	5,485.00	5,485.00	181.62	219.40	-38.97	-891.71	3,493.07	2,880.25	2,505.66	374.59	7.689	
7,400.00	6,629.99	5,485.00	5,485.00	182.03	219.40	-32.29	-891.71	3,493.07	2,790.33	2,417.37	372.96	7.482	
7,500.00	6,629.99	5,485.00	5,485.00	182.49	219.40	-24.65	-891.71	3,493.07	2,699.47	2,328.36	371.11	7.274	
7,600.00	6,629.99	5,485.00	5,485.00	183.00	219.40	-16.20	-891.71	3,493.07	2,608.04	2,239.01	369.03	7.067	
7,700.00	6,629.99	5,485.00	5,485.00	183.54	219.40	-7.27	-891.71	3,493.07	2,516.45	2,149.78	366.67	6.863	
7,800.00	6,629.99	5,485.00	5,485.00	184.12	219.40	1.66	-891.71	3,493.07	2,425.16	2,061.14	364.02	6.662	
7,900.00	6,629.99	5,485.00	5,485.00	184.73	219.40	10.11	-891.71	3,493.07	2,334.67	1,973.64	361.02	6.467	

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

Lonestar Consulting, LLC

Anticollision Report

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - McElvain 001A - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 100-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
7,926.71	6,629.99	5,485.00	5,485.00	184.90	219.40	12.24	-891.71	3,493.07	2,310.70	1,950.54	360.16	6.416	
8,000.00	6,629.99	5,485.00	5,485.00	185.37	219.40	12.24	-891.71	3,493.07	2,245.32	1,887.66	357.66	6.278	
8,100.00	6,629.99	5,485.00	5,485.00	186.06	219.40	12.24	-891.71	3,493.07	2,156.94	1,803.06	353.88	6.095	
8,200.00	6,629.99	5,485.00	5,485.00	186.79	219.40	12.24	-891.71	3,493.07	2,069.61	1,719.99	349.62	5.920	
8,300.00	6,629.99	5,485.00	5,485.00	187.57	219.40	12.24	-891.71	3,493.07	1,983.48	1,638.69	344.80	5.753	
8,400.00	6,629.99	5,485.00	5,485.00	188.39	219.40	12.24	-891.71	3,493.07	1,898.72	1,559.40	339.32	5.596	
8,500.00	6,629.99	5,485.00	5,485.00	189.26	219.40	12.24	-891.71	3,493.07	1,815.50	1,482.42	333.08	5.451	
8,600.00	6,629.99	5,485.00	5,485.00	190.17	219.40	12.24	-891.71	3,493.07	1,734.05	1,408.10	325.95	5.320	
8,700.00	6,629.99	5,485.00	5,485.00	191.13	219.40	12.24	-891.71	3,493.07	1,654.65	1,336.85	317.79	5.207	
8,800.00	6,629.99	5,485.00	5,485.00	192.13	219.40	12.24	-891.71	3,493.07	1,577.58	1,269.16	308.42	5.115	
8,900.00	6,629.99	5,485.00	5,485.00	193.17	219.40	12.24	-891.71	3,493.07	1,503.22	1,205.57	297.65	5.050	
9,000.00	6,629.99	5,485.00	5,485.00	194.25	219.40	12.24	-891.71	3,493.07	1,431.99	1,146.72	285.27	5.020	
9,050.32	6,629.99	5,485.00	5,485.00	194.82	219.40	12.24	-891.71	3,493.07	1,397.47	1,119.11	278.36	5.020	
9,100.00	6,629.99	5,485.00	5,485.00	195.38	219.40	12.24	-891.71	3,493.07	1,364.37	1,093.31	271.06	5.034	
9,148.62	6,629.99	5,485.00	5,485.00	195.94	219.40	12.24	-891.71	3,493.07	1,332.96	1,069.54	263.42	5.060	
9,200.00	6,629.99	5,485.00	5,485.00	196.54	219.40	12.24	-891.71	3,493.07	1,300.93	1,046.12	254.80	5.106	
9,246.85	6,629.99	5,485.00	5,485.00	197.10	219.40	12.24	-891.71	3,493.07	1,272.82	1,026.38	246.44	5.165	
9,300.00	6,629.99	5,485.00	5,485.00	197.74	219.40	12.24	-891.71	3,493.07	1,242.30	1,005.96	236.34	5.256	
9,345.00	6,629.99	5,485.00	5,485.00	198.30	219.40	12.24	-891.71	3,493.07	1,217.69	990.39	227.30	5.357	
9,400.00	6,629.99	5,485.00	5,485.00	198.99	219.40	12.24	-891.71	3,493.07	1,189.21	973.59	215.62	5.515	
9,443.04	6,629.99	5,485.00	5,485.00	199.54	219.40	12.24	-891.71	3,493.07	1,168.26	962.22	206.04	5.670	
9,500.00	6,629.99	5,485.00	5,485.00	200.27	219.40	12.24	-891.71	3,493.07	1,142.43	949.63	192.80	5.926	
9,540.98	6,629.99	5,485.00	5,485.00	200.81	219.40	12.24	-891.71	3,493.07	1,125.26	942.32	182.94	6.151	
9,600.00	6,629.99	5,485.00	5,485.00	201.59	219.40	12.24	-891.71	3,493.07	1,102.75	934.35	168.40	6.548	
9,638.78	6,629.99	5,485.00	5,485.00	202.11	219.40	12.24	-891.71	3,493.07	1,089.44	930.70	158.74	6.863	
9,700.00	6,629.99	5,485.00	5,485.00	202.94	219.40	12.24	-891.71	3,493.07	1,070.96	927.33	143.63	7.456	
9,736.44	6,629.99	5,485.00	5,485.00	203.45	219.40	12.24	-891.71	3,493.07	1,061.49	926.56	134.93	7.867	
9,800.00	6,629.99	5,485.00	5,485.00	204.34	219.40	12.24	-891.71	3,493.07	1,047.79	926.94	120.86	8.670	
9,833.97	6,629.99	5,485.00	5,485.00	204.82	219.40	12.24	-891.71	3,493.07	1,041.99	927.75	114.25	9.121	
9,900.00	6,629.99	5,485.00	5,485.00	205.76	219.40	12.24	-891.71	3,493.07	1,033.82	929.64	104.18	9.923	
9,931.36	6,629.99	5,485.00	5,485.00	206.22	219.40	12.24	-891.71	3,493.07	1,031.40	930.31	101.09	10.203	
9,995.45	6,629.99	5,485.00	5,485.00	207.16	219.40	12.24	-891.71	3,493.07	1,029.40	930.45	98.95	10.403	CC
10,000.00	6,629.99	5,485.00	5,485.00	207.22	219.40	12.24	-891.71	3,493.07	1,029.41	930.39	99.03	10.395	
10,100.00	6,629.99	5,485.00	5,485.00	208.72	219.40	12.24	-891.71	3,493.07	1,034.70	926.79	107.91	9.589	
10,200.00	6,629.99	5,485.00	5,485.00	210.25	219.40	12.24	-891.71	3,493.07	1,049.53	922.39	127.14	8.255	
10,300.00	6,629.99	5,485.00	5,485.00	211.81	219.40	12.24	-891.71	3,493.07	1,073.51	922.25	151.26	7.097	ES
10,400.00	6,629.99	5,485.00	5,485.00	213.40	219.40	12.24	-891.71	3,493.07	1,106.05	929.47	176.58	6.264	
10,500.00	6,629.99	5,485.00	5,485.00	215.02	219.40	12.24	-891.71	3,493.07	1,146.41	945.35	201.06	5.702	
10,600.00	6,629.99	5,485.00	5,485.00	216.68	219.40	12.24	-891.71	3,493.07	1,193.80	970.08	223.72	5.336	
10,700.00	6,629.99	5,485.00	5,485.00	218.36	219.40	12.24	-891.71	3,493.07	1,247.43	1,003.29	244.14	5.110	
10,800.00	6,629.99	5,485.00	5,485.00	220.07	219.40	12.24	-891.71	3,493.07	1,306.51	1,044.28	262.23	4.982	
10,900.00	6,629.99	5,485.00	5,485.00	221.81	219.40	12.24	-891.71	3,493.07	1,370.36	1,092.26	278.10	4.928	
11,000.00	6,629.99	5,485.00	5,485.00	223.58	219.40	12.24	-891.71	3,493.07	1,438.33	1,146.40	291.93	4.927	SF
11,100.00	6,629.99	5,485.00	5,485.00	225.37	219.40	12.24	-891.71	3,493.07	1,509.87	1,205.92	303.95	4.968	
11,200.00	6,629.99	5,485.00	5,485.00	227.19	219.40	12.24	-891.71	3,493.07	1,584.49	1,270.12	314.38	5.040	
11,300.00	6,629.99	5,485.00	5,485.00	229.04	219.40	12.24	-891.71	3,493.07	1,661.79	1,338.36	323.43	5.138	
11,400.00	6,629.99	5,485.00	5,485.00	230.91	219.40	12.24	-891.71	3,493.07	1,741.39	1,410.09	331.30	5.256	
11,500.00	6,629.99	5,485.00	5,485.00	232.80	219.40	12.24	-891.71	3,493.07	1,823.01	1,484.85	338.16	5.391	
11,600.00	6,629.99	5,485.00	5,485.00	234.72	219.40	12.24	-891.71	3,493.07	1,906.38	1,562.23	344.15	5.539	
11,700.00	6,629.99	5,485.00	5,485.00	236.67	219.40	12.24	-891.71	3,493.07	1,991.28	1,641.87	349.40	5.699	
11,800.00	6,629.99	5,485.00	5,485.00	238.63	219.40	12.24	-891.71	3,493.07	2,077.52	1,723.50	354.02	5.868	
11,900.00	6,629.99	5,485.00	5,485.00	240.62	219.40	12.24	-891.71	3,493.07	2,164.95	1,806.85	358.10	6.046	

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

Lonestar Consulting, LLC

Anticollision Report

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - McElvain 001A - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 100-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
12,000.00	6,629.99	5,485.00	5,485.00	242.63	219.40	12.24	-891.71	3,493.07	2,253.42	1,891.72	361.70	6.230	
12,100.00	6,629.99	5,485.00	5,485.00	244.66	219.40	12.24	-891.71	3,493.07	2,342.82	1,977.92	364.91	6.420	
12,200.00	6,629.99	5,485.00	5,485.00	246.71	219.40	12.24	-891.71	3,493.07	2,433.05	2,065.29	367.76	6.616	
12,300.00	6,629.99	5,485.00	5,485.00	248.78	219.40	12.24	-891.71	3,493.07	2,524.01	2,153.69	370.32	6.816	
12,400.00	6,629.99	5,485.00	5,485.00	250.87	219.40	12.24	-891.71	3,493.07	2,615.64	2,243.03	372.61	7.020	
12,500.00	6,629.99	5,485.00	5,485.00	252.98	219.40	12.24	-891.71	3,493.07	2,707.85	2,333.18	374.67	7.227	
12,600.00	6,629.99	5,485.00	5,485.00	255.11	219.40	12.24	-891.71	3,493.07	2,800.60	2,424.07	376.53	7.438	
12,700.00	6,629.99	5,485.00	5,485.00	257.25	219.40	12.24	-891.71	3,493.07	2,893.84	2,515.62	378.21	7.651	
12,800.00	6,629.99	5,485.00	5,485.00	259.41	219.40	12.24	-891.71	3,493.07	2,987.51	2,607.77	379.74	7.867	
12,900.00	6,629.99	5,485.00	5,485.00	261.60	219.40	12.24	-891.71	3,493.07	3,081.58	2,700.44	381.13	8.085	
13,000.00	6,630.00	5,485.00	5,485.00	263.79	219.40	12.24	-891.71	3,493.07	3,176.01	2,793.61	382.40	8.305	
13,100.00	6,630.00	5,485.00	5,485.00	266.01	219.40	12.24	-891.71	3,493.07	3,270.77	2,887.21	383.56	8.527	
13,200.00	6,630.00	5,485.00	5,485.00	268.24	219.40	12.24	-891.71	3,493.07	3,365.83	2,981.21	384.62	8.751	
13,300.00	6,630.00	5,485.00	5,485.00	270.48	219.40	12.24	-891.71	3,493.07	3,461.18	3,075.58	385.60	8.976	
13,400.00	6,630.00	5,485.00	5,485.00	272.74	219.40	12.24	-891.71	3,493.07	3,556.78	3,170.28	386.50	9.203	
13,500.00	6,630.00	5,485.00	5,485.00	275.02	219.40	12.24	-891.71	3,493.07	3,652.61	3,265.29	387.33	9.430	
13,600.00	6,630.00	5,485.00	5,485.00	277.31	219.40	12.24	-891.71	3,493.07	3,748.66	3,360.57	388.09	9.659	
13,700.00	6,630.00	5,485.00	5,485.00	279.61	219.40	12.24	-891.71	3,493.07	3,844.92	3,456.12	388.80	9.889	
13,800.00	6,630.00	5,485.00	5,485.00	281.93	219.40	12.24	-891.71	3,493.07	3,941.36	3,551.90	389.46	10.120	
13,900.00	6,630.00	5,485.00	5,485.00	284.26	219.40	12.24	-891.71	3,493.07	4,037.97	3,647.90	390.07	10.352	
14,000.00	6,630.00	5,485.00	5,485.00	286.60	219.40	12.24	-891.71	3,493.07	4,134.75	3,744.10	390.64	10.584	
14,100.00	6,630.00	5,485.00	5,485.00	288.96	219.40	12.24	-891.71	3,493.07	4,231.67	3,840.50	391.17	10.818	
14,200.00	6,630.00	5,485.00	5,485.00	291.33	219.40	12.24	-891.71	3,493.07	4,328.74	3,937.07	391.67	11.052	
14,300.00	6,630.00	5,485.00	5,485.00	293.71	219.40	12.24	-891.71	3,493.07	4,425.93	4,033.80	392.13	11.287	
14,400.00	6,630.00	5,485.00	5,485.00	296.10	219.40	12.24	-891.71	3,493.07	4,523.25	4,130.68	392.57	11.522	
14,500.00	6,630.00	5,485.00	5,485.00	298.51	219.40	12.24	-891.71	3,493.07	4,620.68	4,227.70	392.98	11.758	
14,600.00	6,630.00	5,485.00	5,485.00	300.92	219.40	12.24	-891.71	3,493.07	4,718.22	4,324.86	393.36	11.995	
14,700.00	6,630.00	5,485.00	5,485.00	303.35	219.40	12.24	-891.71	3,493.07	4,815.86	4,422.14	393.72	12.232	
14,800.00	6,630.00	5,485.00	5,485.00	305.79	219.40	12.24	-891.71	3,493.07	4,913.60	4,519.53	394.06	12.469	
14,900.00	6,630.00	5,485.00	5,485.00	308.24	219.40	12.24	-891.71	3,493.07	5,011.42	4,617.04	394.38	12.707	
15,000.00	6,630.00	5,485.00	5,485.00	310.70	219.40	12.24	-891.71	3,493.07	5,109.33	4,714.64	394.69	12.945	
15,100.00	6,630.00	5,485.00	5,485.00	313.16	219.40	12.24	-891.71	3,493.07	5,207.32	4,812.34	394.97	13.184	
15,200.00	6,630.00	5,485.00	5,485.00	315.64	219.40	12.24	-891.71	3,493.07	5,305.38	4,910.14	395.24	13.423	
15,300.00	6,630.00	5,485.00	5,485.00	318.13	219.40	12.24	-891.71	3,493.07	5,403.51	5,008.01	395.50	13.662	
15,400.00	6,630.00	5,485.00	5,485.00	320.63	219.40	12.24	-891.71	3,493.07	5,501.72	5,105.97	395.75	13.902	
15,500.00	6,630.00	5,485.00	5,485.00	323.13	219.40	12.24	-891.71	3,493.07	5,599.98	5,204.00	395.98	14.142	
15,600.00	6,630.00	5,485.00	5,485.00	325.65	219.40	12.24	-891.71	3,493.07	5,698.31	5,302.11	396.20	14.382	
15,700.00	6,630.00	5,485.00	5,485.00	328.17	219.40	12.24	-891.71	3,493.07	5,796.69	5,400.28	396.41	14.623	
15,800.00	6,630.00	5,485.00	5,485.00	330.71	219.40	12.24	-891.71	3,493.07	5,895.13	5,498.52	396.61	14.864	
15,900.00	6,630.00	5,485.00	5,485.00	333.25	219.40	12.24	-891.71	3,493.07	5,993.62	5,596.82	396.80	15.105	
16,000.00	6,630.00	5,485.00	5,485.00	335.80	219.40	12.24	-891.71	3,493.07	6,092.15	5,695.18	396.98	15.346	
16,100.00	6,630.00	5,485.00	5,485.00	338.35	219.40	12.24	-891.71	3,493.07	6,190.74	5,793.59	397.15	15.588	
16,200.00	6,630.00	5,485.00	5,485.00	340.92	219.40	12.24	-891.71	3,493.07	6,289.37	5,892.05	397.32	15.830	
16,227.67	6,630.00	5,485.00	5,485.00	341.63	219.40	12.24	-891.71	3,493.07	6,316.66	5,919.30	397.36	15.896	

Hilcorp

Lonestar Consulting, LLC

Anticollision Report

LONESTAR CONSULTING

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 066R - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 227-INCLINOMETER

Offset Well Error: 0.00 usft

Rule Assigned:

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	10.00	10.00	0.00	0.30	-35.36	560.64	-397.86	687.47	687.16	0.30	2,262.305	
100.00	100.00	110.00	110.00	3.04	3.34	-35.36	560.64	-397.86	687.47	681.09	6.38	107.795	
122.00	122.00	132.00	132.00	3.70	4.01	-35.36	560.64	-397.86	687.47	679.75	7.71	89.122	
200.00	200.00	210.00	210.00	6.07	6.38	-35.36	560.64	-397.86	687.47	675.02	12.45	55.214	
300.00	300.00	310.00	310.00	9.11	9.41	-35.36	560.64	-397.86	687.47	668.94	18.52	37.111	
353.00	352.97	362.97	362.97	10.72	11.02	-35.36	560.64	-397.86	687.47	665.72	21.74	31.619	
400.00	399.97	410.11	410.10	12.15	12.45	-35.34	561.02	-397.86	687.77	663.17	24.60	27.957	
473.00	472.93	484.11	484.11	14.36	14.70	-35.35	560.93	-397.86	687.70	658.64	29.07	23.661	
500.00	499.93	511.50	511.49	15.18	15.53	-35.35	560.87	-397.86	687.65	656.93	30.72	22.387	
600.00	599.93	609.96	609.93	18.22	18.52	-35.36	560.64	-397.86	687.47	650.72	36.74	18.710	
700.00	699.93	709.96	709.93	21.26	21.56	-35.36	560.64	-397.86	687.47	644.65	42.82	16.056	
800.00	799.93	809.96	809.93	24.29	24.60	-35.36	560.64	-397.86	687.47	638.58	48.89	14.061	
836.00	835.85	846.41	846.36	25.39	25.70	-35.31	561.70	-397.86	688.33	637.24	51.09	13.473	
900.00	899.85	911.72	911.67	27.33	27.69	-35.32	561.57	-397.86	688.23	633.21	55.02	12.509	
1,000.00	999.85	1,013.77	1,013.71	30.37	30.79	-35.34	561.06	-397.86	687.81	626.66	61.15	11.247	
1,100.00	1,099.85	1,109.98	1,109.85	33.40	33.71	-35.36	560.64	-397.86	687.47	620.35	67.11	10.244	
1,200.00	1,199.85	1,209.98	1,209.85	36.44	36.74	-35.36	560.64	-397.86	687.47	614.28	73.19	9.393	
1,300.00	1,299.85	1,309.98	1,309.85	39.48	39.78	-35.36	560.64	-397.86	687.47	608.21	79.26	8.674	
1,327.00	1,326.73	1,336.86	1,336.73	40.30	40.60	-35.36	560.64	-397.86	687.47	606.57	80.90	8.498	
1,400.00	1,399.73	1,411.23	1,411.08	42.51	42.86	-35.29	562.10	-397.86	688.66	603.29	85.37	8.067	
1,500.00	1,499.73	1,513.48	1,513.32	45.55	45.96	-35.31	561.66	-397.86	688.30	596.79	91.51	7.522	
1,600.00	1,599.73	1,615.75	1,615.58	48.59	49.07	-35.35	560.80	-397.86	687.62	589.97	97.65	7.042	
1,652.56	1,652.29	1,662.61	1,662.29	50.18	50.49	-35.36	560.64	-397.86	687.47	586.79	100.67	6.829	
1,700.00	1,699.73	1,710.05	1,709.73	51.62	51.93	-35.36	560.64	-397.86	687.47	583.91	103.56	6.639	
1,761.00	1,760.60	1,770.93	1,770.60	53.48	53.78	-35.36	560.64	-397.86	687.47	580.21	107.26	6.410	
1,800.00	1,799.60	1,810.32	1,809.98	54.66	54.98	-35.30	561.95	-397.86	688.53	578.89	109.64	6.280	
1,900.00	1,899.60	1,915.65	1,915.29	57.70	58.17	-35.33	561.38	-397.86	688.09	572.22	115.87	5.939	
2,000.00	1,999.60	2,010.08	2,009.60	60.74	61.04	-35.36	560.64	-397.86	687.47	565.69	121.78	5.645	
2,100.00	2,099.60	2,110.08	2,109.60	63.77	64.08	-35.36	560.64	-397.86	687.47	559.62	127.85	5.377	
2,200.00	2,199.60	2,210.08	2,209.60	66.81	67.12	-35.36	560.64	-397.86	687.47	553.54	133.92	5.133	
2,259.00	2,258.51	2,270.55	2,270.03	68.60	68.95	-35.27	562.50	-397.86	688.98	551.43	137.55	5.009	
2,300.00	2,299.50	2,313.02	2,312.50	69.85	70.24	-35.28	562.33	-397.86	688.85	548.76	140.09	4.917	
2,400.00	2,399.50	2,416.63	2,416.09	72.88	73.39	-35.32	561.45	-397.86	688.16	541.89	146.26	4.705	
2,500.00	2,499.50	2,510.16	2,509.50	75.92	76.23	-35.36	560.64	-397.86	687.47	535.32	152.15	4.518	
2,599.99	2,599.50	2,610.16	2,609.50	78.96	79.27	-35.36	560.64	-397.86	687.47	529.24	158.22	4.345	
2,690.00	2,689.42	2,700.08	2,699.42	81.69	82.00	-35.36	560.64	-397.86	687.47	523.78	163.69	4.200	
2,699.99	2,699.42	2,710.08	2,709.42	81.99	82.30	-35.36	560.64	-397.86	687.47	523.17	164.29	4.184	
2,799.99	2,799.42	2,812.24	2,811.56	85.03	85.40	-35.30	561.83	-397.86	688.44	518.01	170.43	4.039	
2,899.99	2,899.42	2,914.80	2,914.12	88.07	88.52	-35.33	561.21	-397.86	687.95	511.37	176.58	3.896	
2,999.99	2,999.42	3,010.17	3,009.42	91.10	91.41	-35.36	560.64	-397.86	687.47	504.95	182.52	3.767	
3,099.99	3,099.42	3,110.17	3,109.42	94.14	94.45	-35.36	560.64	-397.86	687.47	498.88	188.59	3.645	
3,199.99	3,199.42	3,212.81	3,212.05	97.18	97.57	-35.34	561.13	-397.86	687.87	493.12	194.74	3.532	
3,271.00	3,270.31	3,286.03	3,285.26	99.33	99.79	-35.36	560.63	-397.86	687.48	488.36	199.12	3.453	
3,274.19	3,273.50	3,289.32	3,288.55	99.43	99.89	-35.36	560.60	-397.86	687.45	488.14	199.32	3.449	CC
3,299.99	3,299.30	3,310.10	3,309.30	100.21	100.52	-35.36	560.64	-397.86	687.47	486.73	200.74	3.425	
3,399.99	3,399.30	3,410.78	3,409.99	103.25	103.58	-35.35	560.98	-397.86	687.74	480.91	206.83	3.325	
3,499.99	3,499.30	3,510.11	3,509.30	106.29	106.60	-35.36	560.64	-397.86	687.47	474.58	212.88	3.229	
3,517.00	3,516.25	3,527.06	3,526.25	106.80	107.11	-35.36	560.64	-397.86	687.47	473.55	213.91	3.214	
3,599.99	3,599.25	3,610.05	3,609.25	109.32	109.63	-35.36	560.64	-397.86	687.47	468.51	218.95	3.140	
3,699.99	3,699.25	3,710.14	3,709.32	112.36	112.67	-35.33	561.32	-397.86	688.02	462.99	225.03	3.057	
3,799.99	3,799.24	3,811.94	3,811.12	115.40	115.76	-35.34	561.15	-397.86	687.88	456.72	231.16	2.976	
3,899.99	3,899.24	3,913.75	3,912.93	118.44	118.85	-35.36	560.64	-397.86	687.48	450.19	237.28	2.897	

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

Hilcorp

Lonestar Consulting, LLC

Anticollision Report

LONESTAR CONSULTING

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 066R - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 227-INCLINOMETER

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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
3,903.88	3,903.13	3,917.70	3,916.88	118.55	118.97	-35.36	560.62	-397.86	687.46	449.93	237.52	2.894	
3,942.00	3,941.19	3,952.04	3,951.19	119.71	120.02	-35.36	560.64	-397.86	687.47	447.74	239.73	2.868	
3,999.99	3,999.18	4,010.04	4,009.18	121.47	121.78	-35.36	560.64	-397.86	687.47	444.22	243.25	2.826	
4,099.99	4,099.18	4,110.04	4,109.18	124.51	124.81	-35.36	560.64	-397.86	687.47	438.14	249.32	2.757	
4,199.99	4,199.18	4,211.05	4,210.18	127.55	127.88	-35.31	561.67	-397.86	688.31	432.88	255.43	2.695	
4,299.99	4,299.18	4,313.10	4,312.22	130.58	130.98	-35.33	561.30	-397.86	688.01	426.45	261.56	2.630	
4,399.99	4,399.18	4,410.15	4,409.18	133.62	133.93	-35.36	560.64	-397.86	687.47	419.92	267.55	2.570	
4,412.00	4,411.15	4,422.12	4,421.15	133.98	134.29	-35.36	560.64	-397.86	687.47	419.19	268.28	2.563	
4,499.99	4,499.14	4,510.11	4,509.14	136.66	136.96	-35.36	560.64	-397.86	687.47	413.85	273.62	2.512	
4,599.99	4,599.14	4,611.26	4,610.26	139.69	140.03	-35.31	561.77	-397.86	688.39	408.66	279.73	2.461	
4,699.99	4,699.14	4,715.64	4,714.63	142.73	143.20	-35.34	561.16	-397.86	687.91	401.98	285.93	2.406	
4,799.99	4,799.14	4,810.20	4,809.14	145.77	146.08	-35.36	560.64	-397.86	687.47	395.62	291.84	2.356	
4,899.99	4,899.14	4,910.20	4,909.14	148.80	149.11	-35.36	560.64	-397.86	687.47	389.55	297.92	2.308	
4,999.99	4,999.14	5,010.54	5,009.47	151.84	152.16	-35.31	561.66	-397.86	688.29	384.29	304.00	2.264	
5,099.99	5,099.14	5,112.70	5,111.62	154.88	155.26	-35.32	561.40	-397.86	688.09	377.95	310.14	2.219	
5,199.99	5,199.14	5,214.87	5,213.79	157.91	158.37	-35.36	560.75	-397.86	687.57	371.30	316.27	2.174	
5,248.61	5,247.75	5,258.87	5,257.75	159.39	159.70	-35.36	560.64	-397.86	687.47	368.37	319.09	2.154	
5,299.99	5,299.14	5,310.25	5,309.14	160.95	161.26	-35.36	560.64	-397.86	687.47	365.25	322.21	2.134	
5,399.99	5,399.14	5,410.25	5,409.14	163.99	164.30	-35.36	560.64	-397.86	687.47	359.18	328.29	2.094	
5,415.00	5,414.03	5,425.15	5,424.03	164.44	164.75	-35.36	560.64	-397.86	687.47	358.27	329.19	2.088	
5,499.99	5,499.02	5,510.13	5,509.02	167.02	167.33	-35.36	560.64	-397.86	687.47	353.11	334.36	2.056	
5,599.99	5,599.02	5,610.74	5,609.61	170.06	170.39	-35.31	561.69	-397.86	688.32	347.87	340.45	2.022	
5,699.99	5,699.02	5,711.88	5,710.75	173.10	173.46	-35.32	561.48	-397.86	688.15	341.60	346.56	1.986	Collision Risk Procedures Req.
5,799.99	5,799.02	5,813.02	5,811.89	176.14	176.53	-35.34	561.07	-397.86	687.82	335.16	352.66	1.950	Collision Risk Procedures Req.
5,822.00	5,820.97	5,835.22	5,834.09	176.80	177.20	-35.35	560.95	-397.86	687.72	333.72	354.00	1.943	Collision Risk Procedures Req.
5,875.12	5,874.08	5,888.95	5,887.81	178.42	178.84	-35.36	560.62	-397.86	687.46	330.21	357.25	1.924	Collision Risk Procedures Req.
5,900.00	5,898.96	5,900.00	5,898.83	179.17	179.17	-35.36	560.64	-397.86	687.54	329.24	358.31	1.919	Collision Risk Procedures Req., ES, SF
5,950.00	5,948.92	5,900.00	5,898.83	179.93	179.17	-160.25	560.64	-397.86	691.69	333.94	357.75	1.933	Collision Risk Procedures Req.
6,000.00	5,998.65	5,900.00	5,898.83	179.93	179.17	-159.95	560.64	-397.86	702.54	347.84	354.70	1.981	Collision Risk Procedures Req.
6,050.00	6,047.91	5,900.00	5,898.83	179.93	179.17	-159.46	560.64	-397.86	719.73	369.48	350.25	2.055	
6,100.00	6,096.48	5,900.00	5,898.83	179.93	179.17	-158.73	560.64	-397.86	742.75	397.92	344.83	2.154	
6,150.00	6,144.12	5,900.00	5,898.83	179.94	179.17	-157.73	560.64	-397.86	770.97	432.06	338.91	2.275	
6,200.00	6,190.61	5,900.00	5,898.83	179.94	179.17	-156.40	560.64	-397.86	803.72	470.81	332.91	2.414	
6,250.00	6,235.74	5,900.00	5,898.83	179.94	179.17	-154.66	560.64	-397.86	840.33	513.15	327.18	2.568	
6,300.00	6,279.30	5,900.00	5,898.83	179.95	179.17	-152.35	560.64	-397.86	880.16	558.20	321.96	2.734	
6,350.00	6,321.08	5,900.00	5,898.83	179.95	179.17	-149.27	560.64	-397.86	922.62	605.22	317.40	2.907	
6,400.00	6,360.88	5,900.00	5,898.83	179.96	179.17	-145.08	560.64	-397.86	967.17	653.58	313.59	3.084	
6,450.00	6,398.52	5,900.00	5,898.83	179.98	179.17	-139.28	560.64	-397.86	1,013.34	702.79	310.55	3.263	
6,500.00	6,433.83	5,900.00	5,898.83	180.00	179.17	-131.05	560.64	-397.86	1,060.73	752.46	308.27	3.441	
6,550.00	6,466.64	5,900.00	5,898.83	180.02	179.17	-119.30	560.64	-397.86	1,108.97	802.26	306.71	3.616	
6,600.00	6,496.79	5,900.00	5,898.83	180.05	179.17	-103.16	560.64	-397.86	1,157.73	851.92	305.81	3.786	
6,650.00	6,524.14	5,900.00	5,898.83	180.09	179.17	-83.77	560.64	-397.86	1,206.76	901.23	305.52	3.950	
6,700.00	6,548.58	5,900.00	5,898.83	180.14	179.17	-64.98	560.64	-397.86	1,255.79	950.02	305.77	4.107	
6,750.00	6,569.97	5,900.00	5,898.83	180.20	179.17	-50.08	560.64	-397.86	1,304.61	998.11	306.49	4.257	
6,800.00	6,588.23	5,900.00	5,898.83	180.27	179.17	-39.40	560.64	-397.86	1,353.02	1,045.40	307.63	4.398	
6,850.00	6,603.26	5,900.00	5,898.83	180.35	179.17	-31.88	560.64	-397.86	1,400.86	1,091.75	309.11	4.532	
6,900.00	6,615.00	5,900.00	5,898.83	180.45	179.17	-26.51	560.64	-397.86	1,447.97	1,137.08	310.90	4.657	
6,950.00	6,623.39	5,900.00	5,898.83	180.55	179.17	-22.56	560.64	-397.86	1,494.21	1,181.28	312.93	4.775	
7,000.00	6,628.40	5,900.00	5,898.83	180.67	179.17	-19.56	560.64	-397.86	1,539.45	1,224.29	315.16	4.885	
7,048.30	6,629.99	5,900.00	5,898.83	180.79	179.17	-17.31	560.64	-397.86	1,582.09	1,264.62	317.47	4.983	
7,100.00	6,629.99	5,900.00	5,898.83	180.94	179.17	-20.80	560.64	-397.86	1,627.19	1,307.30	319.89	5.087	
7,200.00	6,629.99	5,900.00	5,898.83	181.25	179.17	-27.36	560.64	-397.86	1,714.57	1,390.55	324.02	5.292	

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

Hilcorp

Lonestar Consulting, LLC

Anticollision Report

LONESTAR CONSULTING

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 066R - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 227-INCLINOMETER

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
7,300.00	6,629.99	5,900.00	5,898.83	181.62	179.17	-33.50	560.64	-397.86	1,801.77	1,474.26	327.51	5.501	
7,400.00	6,629.99	5,900.00	5,898.83	182.03	179.17	-39.09	560.64	-397.86	1,888.42	1,557.93	330.49	5.714	
7,500.00	6,629.99	5,900.00	5,898.83	182.49	179.17	-44.08	560.64	-397.86	1,974.21	1,641.16	333.05	5.928	
7,600.00	6,629.99	5,900.00	5,898.83	183.00	179.17	-48.47	560.64	-397.86	2,058.85	1,723.60	335.25	6.141	
7,700.00	6,629.99	5,900.00	5,898.83	183.54	179.17	-52.30	560.64	-397.86	2,142.08	1,804.92	337.16	6.353	
7,800.00	6,629.99	5,900.00	5,898.83	184.12	179.17	-55.62	560.64	-397.86	2,223.68	1,884.85	338.83	6.563	
7,900.00	6,629.99	5,900.00	5,898.83	184.73	179.17	-58.50	560.64	-397.86	2,303.45	1,963.16	340.28	6.769	
7,926.71	6,629.99	5,900.00	5,898.83	184.90	179.17	-59.20	560.64	-397.86	2,324.42	1,983.78	340.64	6.824	
8,000.00	6,629.99	5,900.00	5,898.83	185.37	179.17	-59.20	560.64	-397.86	2,382.20	2,040.62	341.58	6.974	
8,100.00	6,629.99	5,900.00	5,898.83	186.06	179.17	-59.20	560.64	-397.86	2,462.38	2,119.60	342.78	7.184	
8,200.00	6,629.99	5,900.00	5,898.83	186.79	179.17	-59.20	560.64	-397.86	2,543.95	2,200.07	343.88	7.398	
8,300.00	6,629.99	5,900.00	5,898.83	187.57	179.17	-59.20	560.64	-397.86	2,626.80	2,281.91	344.90	7.616	
8,400.00	6,629.99	5,900.00	5,898.83	188.39	179.17	-59.20	560.64	-397.86	2,710.81	2,364.98	345.83	7.839	
8,500.00	6,629.99	5,900.00	5,898.83	189.26	179.17	-59.20	560.64	-397.86	2,795.87	2,449.18	346.69	8.064	
8,600.00	6,629.99	5,900.00	5,898.83	190.17	179.17	-59.20	560.64	-397.86	2,881.89	2,534.41	347.49	8.294	
8,700.00	6,629.99	5,900.00	5,898.83	191.13	179.17	-59.20	560.64	-397.86	2,968.79	2,620.57	348.22	8.526	
8,800.00	6,629.99	5,900.00	5,898.83	192.13	179.17	-59.20	560.64	-397.86	3,056.49	2,707.59	348.90	8.760	
8,900.00	6,629.99	5,900.00	5,898.83	193.17	179.17	-59.20	560.64	-397.86	3,144.92	2,795.40	349.52	8.998	
9,000.00	6,629.99	5,900.00	5,898.83	194.25	179.17	-59.20	560.64	-397.86	3,234.03	2,883.92	350.11	9.237	
9,100.00	6,629.99	5,900.00	5,898.83	195.38	179.17	-59.20	560.64	-397.86	3,323.75	2,973.11	350.64	9.479	
9,200.00	6,629.99	5,900.00	5,898.83	196.54	179.17	-59.20	560.64	-397.86	3,414.05	3,062.91	351.14	9.723	
9,300.00	6,629.99	5,900.00	5,898.83	197.74	179.17	-59.20	560.64	-397.86	3,504.87	3,153.26	351.61	9.968	
9,400.00	6,629.99	5,900.00	5,898.83	198.99	179.17	-59.20	560.64	-397.86	3,596.18	3,244.14	352.04	10.215	
9,500.00	6,629.99	5,900.00	5,898.83	200.27	179.17	-59.20	560.64	-397.86	3,687.95	3,335.50	352.45	10.464	
9,600.00	6,629.99	5,900.00	5,898.83	201.59	179.17	-59.20	560.64	-397.86	3,780.13	3,427.30	352.82	10.714	
9,700.00	6,629.99	5,900.00	5,898.83	202.94	179.17	-59.20	560.64	-397.86	3,872.69	3,519.52	353.18	10.965	
9,800.00	6,629.99	5,900.00	5,898.83	204.34	179.17	-59.20	560.64	-397.86	3,965.62	3,612.12	353.50	11.218	
9,900.00	6,629.99	5,900.00	5,898.83	205.76	179.17	-59.20	560.64	-397.86	4,058.89	3,705.07	353.81	11.472	
10,000.00	6,629.99	5,900.00	5,898.83	207.22	179.17	-59.20	560.64	-397.86	4,152.46	3,798.36	354.10	11.727	
10,100.00	6,629.99	5,900.00	5,898.83	208.72	179.17	-59.20	560.64	-397.86	4,246.34	3,891.96	354.38	11.983	
10,200.00	6,629.99	5,900.00	5,898.83	210.25	179.17	-59.20	560.64	-397.86	4,340.48	3,985.85	354.63	12.239	
10,300.00	6,629.99	5,900.00	5,898.83	211.81	179.17	-59.20	560.64	-397.86	4,434.88	4,080.01	354.87	12.497	
10,400.00	6,629.99	5,900.00	5,898.83	213.40	179.17	-59.20	560.64	-397.86	4,529.52	4,174.42	355.10	12.756	
10,500.00	6,629.99	5,900.00	5,898.83	215.02	179.17	-59.20	560.64	-397.86	4,624.39	4,269.07	355.32	13.015	
10,600.00	6,629.99	5,900.00	5,898.83	216.68	179.17	-59.20	560.64	-397.86	4,719.47	4,363.95	355.52	13.275	
10,700.00	6,629.99	5,900.00	5,898.83	218.36	179.17	-59.20	560.64	-397.86	4,814.75	4,459.04	355.71	13.536	
10,800.00	6,629.99	5,900.00	5,898.83	220.07	179.17	-59.20	560.64	-397.86	4,910.21	4,554.32	355.89	13.797	
10,900.00	6,629.99	5,900.00	5,898.83	221.81	179.17	-59.20	560.64	-397.86	5,005.86	4,649.79	356.06	14.059	
11,000.00	6,629.99	5,900.00	5,898.83	223.58	179.17	-59.20	560.64	-397.86	5,101.67	4,745.44	356.23	14.321	
11,100.00	6,629.99	5,900.00	5,898.83	225.37	179.17	-59.20	560.64	-397.86	5,197.63	4,841.25	356.38	14.584	
11,200.00	6,629.99	5,900.00	5,898.83	227.19	179.17	-59.20	560.64	-397.86	5,293.75	4,937.22	356.53	14.848	
11,300.00	6,629.99	5,900.00	5,898.83	229.04	179.17	-59.20	560.64	-397.86	5,390.01	5,033.34	356.67	15.112	
11,400.00	6,629.99	5,900.00	5,898.83	230.91	179.17	-59.20	560.64	-397.86	5,486.40	5,129.60	356.81	15.376	
11,500.00	6,629.99	5,900.00	5,898.83	232.80	179.17	-59.20	560.64	-397.86	5,582.92	5,225.99	356.94	15.641	
11,600.00	6,629.99	5,900.00	5,898.83	234.72	179.17	-59.20	560.64	-397.86	5,679.56	5,322.50	357.06	15.907	
11,700.00	6,629.99	5,900.00	5,898.83	236.67	179.17	-59.20	560.64	-397.86	5,776.32	5,419.14	357.17	16.172	
11,800.00	6,629.99	5,900.00	5,898.83	238.63	179.17	-59.20	560.64	-397.86	5,873.18	5,515.89	357.29	16.438	
11,900.00	6,629.99	5,900.00	5,898.83	240.62	179.17	-59.20	560.64	-397.86	5,970.14	5,612.75	357.39	16.705	
12,000.00	6,629.99	5,900.00	5,898.83	242.63	179.17	-59.20	560.64	-397.86	6,067.21	5,709.71	357.50	16.971	
12,100.00	6,629.99	5,900.00	5,898.83	244.66	179.17	-59.20	560.64	-397.86	6,164.37	5,806.77	357.59	17.238	
12,200.00	6,629.99	5,900.00	5,898.83	246.71	179.17	-59.20	560.64	-397.86	6,261.62	5,903.93	357.69	17.506	
12,300.00	6,629.99	5,900.00	5,898.83	248.78	179.17	-59.20	560.64	-397.86	6,358.95	6,001.17	357.78	17.773	

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

Lonestar Consulting, LLC

Anticollision Report

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 066R - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 227-INCLINOMETER

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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,400.00	6,629.99	5,900.00	5,898.83	250.87	179.17	-59.20	560.64	-397.86	6,456.36	6,098.50	357.87	18.041	
12,500.00	6,629.99	5,900.00	5,898.83	252.98	179.17	-59.20	560.64	-397.86	6,553.86	6,195.91	357.95	18.309	
12,600.00	6,629.99	5,900.00	5,898.83	255.11	179.17	-59.20	560.64	-397.86	6,651.43	6,293.39	358.03	18.578	
12,700.00	6,629.99	5,900.00	5,898.83	257.25	179.17	-59.20	560.64	-397.86	6,749.06	6,390.95	358.11	18.846	
12,800.00	6,629.99	5,900.00	5,898.83	259.41	179.17	-59.20	560.64	-397.86	6,846.77	6,488.58	358.19	19.115	
12,900.00	6,629.99	5,900.00	5,898.83	261.60	179.17	-59.20	560.64	-397.86	6,944.54	6,586.28	358.26	19.384	
13,000.00	6,630.00	5,900.00	5,898.83	263.79	179.17	-59.20	560.64	-397.86	7,042.38	6,684.05	358.33	19.653	
13,100.00	6,630.00	5,900.00	5,898.83	266.01	179.17	-59.20	560.64	-397.86	7,140.27	6,781.87	358.40	19.923	
13,200.00	6,630.00	5,900.00	5,898.83	268.24	179.17	-59.20	560.64	-397.86	7,238.22	6,879.76	358.46	20.192	
13,300.00	6,630.00	5,900.00	5,898.83	270.48	179.17	-59.20	560.64	-397.86	7,336.23	6,977.70	358.53	20.462	
13,400.00	6,630.00	5,900.00	5,898.83	272.74	179.17	-59.20	560.64	-397.86	7,434.29	7,075.70	358.59	20.732	
13,500.00	6,630.00	5,900.00	5,898.83	275.02	179.17	-59.20	560.64	-397.86	7,532.40	7,173.75	358.65	21.002	
13,600.00	6,630.00	5,900.00	5,898.83	277.31	179.17	-59.20	560.64	-397.86	7,630.56	7,271.85	358.71	21.272	
13,700.00	6,630.00	5,900.00	5,898.83	279.61	179.17	-59.20	560.64	-397.86	7,728.77	7,370.01	358.77	21.543	
13,800.00	6,630.00	5,900.00	5,898.83	281.93	179.17	-59.20	560.64	-397.86	7,827.02	7,468.20	358.82	21.813	
13,900.00	6,630.00	5,900.00	5,898.83	284.26	179.17	-59.20	560.64	-397.86	7,925.32	7,566.45	358.87	22.084	
14,000.00	6,630.00	5,900.00	5,898.83	286.60	179.17	-59.20	560.64	-397.86	8,023.66	7,664.73	358.93	22.355	
14,100.00	6,630.00	5,900.00	5,898.83	288.96	179.17	-59.20	560.64	-397.86	8,122.04	7,763.06	358.98	22.625	
14,200.00	6,630.00	5,900.00	5,898.83	291.33	179.17	-59.20	560.64	-397.86	8,220.46	7,861.43	359.03	22.896	
14,300.00	6,630.00	5,900.00	5,898.83	293.71	179.17	-59.20	560.64	-397.86	8,318.91	7,959.84	359.08	23.168	
14,400.00	6,630.00	5,900.00	5,898.83	296.10	179.17	-59.20	560.64	-397.86	8,417.41	8,058.28	359.12	23.439	
14,500.00	6,630.00	5,900.00	5,898.83	298.51	179.17	-59.20	560.64	-397.86	8,515.93	8,156.77	359.17	23.710	
14,600.00	6,630.00	5,900.00	5,898.83	300.92	179.17	-59.20	560.64	-397.86	8,614.50	8,255.28	359.21	23.982	
14,700.00	6,630.00	5,900.00	5,898.83	303.35	179.17	-59.20	560.64	-397.86	8,713.09	8,353.83	359.26	24.253	
14,800.00	6,630.00	5,900.00	5,898.83	305.79	179.17	-59.20	560.64	-397.86	8,811.72	8,452.42	359.30	24.525	
14,900.00	6,630.00	5,900.00	5,898.83	308.24	179.17	-59.20	560.64	-397.86	8,910.37	8,551.03	359.34	24.796	
15,000.00	6,630.00	5,900.00	5,898.83	310.70	179.17	-59.20	560.64	-397.86	9,009.06	8,649.67	359.38	25.068	
15,100.00	6,630.00	5,900.00	5,898.83	313.16	179.17	-59.20	560.64	-397.86	9,107.77	8,748.35	359.42	25.340	
15,200.00	6,630.00	5,900.00	5,898.83	315.64	179.17	-59.20	560.64	-397.86	9,206.52	8,847.05	359.46	25.612	
15,300.00	6,630.00	5,900.00	5,898.83	318.13	179.17	-59.20	560.64	-397.86	9,305.29	8,945.78	359.50	25.884	
15,400.00	6,630.00	5,900.00	5,898.83	320.63	179.17	-59.20	560.64	-397.86	9,404.08	9,044.54	359.54	26.156	
15,500.00	6,630.00	5,900.00	5,898.83	323.13	179.17	-59.20	560.64	-397.86	9,502.90	9,143.32	359.58	26.428	
15,600.00	6,630.00	5,900.00	5,898.83	325.65	179.17	-59.20	560.64	-397.86	9,601.75	9,242.13	359.62	26.700	
15,700.00	6,630.00	5,900.00	5,898.83	328.17	179.17	-59.20	560.64	-397.86	9,700.62	9,340.96	359.65	26.972	
15,800.00	6,630.00	5,900.00	5,898.83	330.71	179.17	-59.20	560.64	-397.86	9,799.51	9,439.82	359.69	27.244	
15,900.00	6,630.00	5,900.00	5,898.83	333.25	179.17	-59.20	560.64	-397.86	9,898.42	9,538.70	359.72	27.517	
16,000.00	6,630.00	5,900.00	5,898.83	335.80	179.17	-59.20	560.64	-397.86	9,997.36	9,637.60	359.76	27.789	

Hilcorp

Lonestar Consulting, LLC

Anticollision Report

LONESTAR CONSULTING

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 075A - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 220-INCLINOMETER

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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	35.00	35.00	0.00	1.06	159.29	-535.15	202.30	572.12	571.05	1.06	538.172	
100.00	100.00	135.00	135.00	3.04	4.10	159.29	-535.15	202.30	572.12	564.98	7.14	80.165	
122.00	122.00	157.00	157.00	3.70	4.77	159.29	-535.15	202.30	572.12	563.64	8.47	67.523	
200.00	200.00	235.01	235.00	6.07	7.14	159.29	-535.15	202.30	572.12	558.91	13.21	43.308	
300.00	300.00	335.01	335.00	9.11	10.17	159.29	-535.15	202.30	572.12	552.83	19.28	29.668	
321.84	321.84	356.75	356.74	9.77	10.83	159.28	-534.72	202.30	571.71	551.10	20.61	27.743	
353.00	352.97	387.08	387.07	10.72	11.76	159.28	-534.75	202.30	571.74	549.26	22.47	25.439	
400.00	399.97	432.88	432.87	12.15	13.15	159.28	-534.88	202.30	571.86	546.57	25.29	22.610	
473.00	472.93	507.96	507.93	14.36	15.43	159.29	-535.15	202.30	572.12	542.33	29.79	19.205	
500.00	499.93	534.96	534.93	15.18	16.25	159.29	-535.15	202.30	572.12	540.69	31.43	18.203	
600.00	599.93	634.95	634.93	18.22	19.28	159.29	-535.15	202.30	572.12	534.61	37.50	15.255	
700.00	699.93	734.95	734.93	21.26	22.32	159.29	-535.15	202.30	572.12	528.54	43.58	13.129	
740.22	740.15	774.80	774.76	22.48	23.53	159.26	-534.31	202.30	571.33	525.32	46.01	12.418	
800.00	799.93	833.79	833.75	24.29	25.32	159.27	-534.40	202.30	571.41	521.79	49.61	11.517	
836.00	835.85	869.25	869.21	25.39	26.40	159.27	-534.49	202.30	571.50	519.71	51.78	11.036	
900.00	899.85	932.41	932.37	27.33	28.32	159.28	-534.74	202.30	571.73	516.08	55.65	10.274	
1,000.00	999.85	1,034.94	1,034.85	30.37	31.43	159.29	-535.15	202.30	572.12	510.32	61.80	9.258	
1,100.00	1,099.85	1,134.94	1,134.85	33.40	34.47	159.29	-535.15	202.30	572.12	504.25	67.87	8.430	
1,200.00	1,199.85	1,234.94	1,234.85	36.44	37.50	159.29	-535.15	202.30	572.12	498.17	73.94	7.737	
1,240.47	1,240.32	1,275.07	1,274.97	37.67	38.72	159.25	-534.07	202.30	571.10	494.71	76.39	7.476	
1,300.00	1,299.85	1,333.53	1,333.42	39.48	40.50	159.26	-534.17	202.30	571.19	491.22	79.97	7.142	
1,327.00	1,326.73	1,359.92	1,359.81	40.30	41.30	159.26	-534.25	202.30	571.27	489.68	81.60	7.001	
1,400.00	1,399.73	1,431.60	1,431.49	42.51	43.47	159.27	-534.60	202.30	571.60	485.62	85.99	6.647	
1,500.00	1,499.73	1,534.97	1,534.73	45.55	46.61	159.29	-535.15	202.30	572.12	479.95	92.17	6.208	
1,549.00	1,548.73	1,583.97	1,583.72	47.04	48.10	159.27	-534.57	202.30	571.57	476.43	95.14	6.008	
1,600.00	1,599.73	1,630.10	1,629.85	48.59	49.50	159.28	-534.78	202.30	571.78	473.70	98.09	5.829	
1,700.00	1,699.73	1,735.04	1,734.73	51.62	52.69	159.29	-535.15	202.30	572.12	467.80	104.31	5.485	
1,761.00	1,760.60	1,795.91	1,795.60	53.48	54.54	159.29	-535.15	202.30	572.12	464.10	108.02	5.297	
1,800.00	1,799.60	1,834.91	1,834.60	54.66	55.72	159.29	-535.15	202.30	572.12	461.73	110.38	5.183	
1,839.42	1,839.03	1,874.02	1,873.68	55.86	56.91	159.24	-533.59	202.30	570.66	457.89	112.77	5.060	
1,900.00	1,899.60	1,932.30	1,931.96	57.70	58.68	159.24	-533.75	202.30	570.81	454.44	116.38	4.905	
2,000.00	1,999.60	2,028.54	2,028.18	60.74	61.60	159.27	-534.57	202.30	571.61	449.28	122.33	4.673	
2,100.00	2,099.60	2,135.10	2,134.60	63.77	64.84	159.29	-535.15	202.30	572.12	443.51	128.61	4.448	
2,200.00	2,199.60	2,235.10	2,234.60	66.81	67.88	159.29	-535.15	202.30	572.12	437.43	134.68	4.248	
2,239.35	2,238.95	2,274.45	2,273.93	68.00	69.07	159.24	-533.60	202.30	570.66	433.59	137.07	4.163	
2,259.00	2,258.51	2,293.26	2,292.73	68.60	69.64	159.24	-533.61	202.30	570.68	432.43	138.24	4.128	
2,300.00	2,299.50	2,332.70	2,332.16	69.85	70.84	159.24	-533.73	202.30	570.79	430.10	140.68	4.057	
2,400.00	2,399.50	2,428.91	2,428.36	72.88	73.76	159.27	-534.50	202.30	571.53	424.90	146.63	3.898	
2,500.00	2,499.50	2,535.17	2,534.50	75.92	76.99	159.29	-535.15	202.30	572.12	419.21	152.91	3.742	
2,599.99	2,599.50	2,635.17	2,634.50	78.96	80.02	159.29	-535.15	202.30	572.12	413.14	158.98	3.599	
2,679.10	2,678.61	2,714.27	2,713.58	81.36	82.43	159.24	-533.61	202.30	570.67	406.89	163.79	3.484	
2,690.00	2,689.42	2,724.77	2,724.08	81.69	82.75	159.24	-533.61	202.30	570.68	406.24	164.44	3.471	
2,699.99	2,699.42	2,734.48	2,733.79	81.99	83.04	159.24	-533.62	202.30	570.68	405.65	165.03	3.458	
2,799.99	2,799.42	2,831.64	2,830.95	85.03	85.99	159.25	-533.99	202.30	571.04	400.02	171.02	3.339	
2,899.99	2,899.42	2,928.82	2,928.11	88.07	88.94	159.28	-534.89	202.30	571.90	394.91	177.00	3.231	
2,999.99	2,999.42	3,035.20	3,034.42	91.10	92.17	159.29	-535.15	202.30	572.12	388.84	183.28	3.122	
3,099.99	3,099.42	3,135.20	3,134.42	94.14	95.21	159.29	-535.15	202.30	572.12	382.77	189.35	3.021	
3,199.99	3,199.42	3,235.20	3,234.42	97.18	98.25	159.29	-535.15	202.30	572.12	376.69	195.42	2.928	
3,246.27	3,245.69	3,281.47	3,280.68	98.58	99.65	159.24	-533.71	202.30	570.76	372.53	198.23	2.879	
3,271.00	3,270.31	3,305.75	3,304.96	99.33	100.39	159.24	-533.72	202.30	570.77	371.05	199.72	2.858	
3,299.99	3,299.30	3,334.35	3,333.55	100.21	101.26	159.24	-533.74	202.30	570.80	369.33	201.47	2.833	
3,399.99	3,399.30	3,432.98	3,432.18	103.25	104.25	159.25	-534.01	202.30	571.05	363.55	207.50	2.752	

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

Lonestar Consulting, LLC

Anticollision Report

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 075A - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 220-INCLINOMETER

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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
3,499.99	3,499.30	3,531.62	3,530.81	106.29	107.25	159.27	-534.53	202.30	571.54	358.01	213.53	2.677	
3,517.00	3,516.25	3,548.33	3,547.53	106.80	107.76	159.27	-534.65	202.30	571.65	357.10	214.56	2.664	
3,599.99	3,599.25	3,635.12	3,634.25	109.32	110.39	159.29	-535.15	202.30	572.12	352.40	219.72	2.604	
3,671.36	3,670.62	3,706.50	3,705.61	111.49	112.56	159.28	-534.75	202.30	571.73	347.68	224.05	2.552	
3,699.99	3,699.25	3,733.77	3,732.88	112.36	113.39	159.28	-534.78	202.30	571.77	346.02	225.75	2.533	
3,799.99	3,799.24	3,835.14	3,834.24	115.40	116.47	159.29	-535.15	202.30	572.12	340.25	231.86	2.467	
3,899.99	3,899.24	3,935.14	3,934.24	118.44	119.50	159.29	-535.15	202.30	572.12	334.18	237.94	2.404	
3,942.00	3,941.19	3,977.08	3,976.19	119.71	120.78	159.29	-535.15	202.30	572.12	331.63	240.49	2.379	
3,999.99	3,999.18	4,035.07	4,034.18	121.47	122.54	159.29	-535.15	202.30	572.12	328.11	244.01	2.345	
4,040.34	4,039.53	4,075.22	4,074.33	122.70	123.76	159.27	-534.61	202.30	571.60	325.15	246.45	2.319	
4,099.99	4,099.18	4,134.33	4,133.43	124.51	125.55	159.27	-534.66	202.30	571.65	321.59	250.06	2.286	
4,199.99	4,199.18	4,233.43	4,232.53	127.55	128.56	159.28	-534.88	202.30	571.86	315.76	256.11	2.233	
4,299.99	4,299.18	4,335.14	4,334.18	130.58	131.65	159.29	-535.15	202.30	572.12	309.88	262.23	2.182	
4,399.99	4,399.18	4,435.14	4,434.18	133.62	134.69	159.29	-535.15	202.30	572.12	303.81	268.31	2.132	
4,412.00	4,411.15	4,447.11	4,446.15	133.98	135.05	159.29	-535.15	202.30	572.12	303.08	269.03	2.127	
4,444.00	4,443.15	4,478.51	4,477.54	134.96	136.00	159.26	-534.32	202.30	571.33	300.37	270.96	2.109	
4,499.99	4,499.14	4,532.49	4,531.52	136.66	137.64	159.27	-534.48	202.30	571.49	297.19	274.30	2.083	
4,599.99	4,599.14	4,635.20	4,634.14	139.69	140.76	159.29	-535.15	202.30	572.12	291.66	280.45	2.040	
4,699.99	4,699.14	4,735.20	4,734.14	142.73	143.80	159.29	-535.15	202.30	572.12	285.59	286.53	1.997	Collision Risk Procedures Req.
4,740.45	4,739.59	4,775.65	4,774.56	143.96	145.03	159.25	-533.95	202.30	570.99	282.01	288.99	1.976	Collision Risk Procedures Req.
4,799.99	4,799.14	4,832.29	4,831.19	145.77	146.75	159.25	-534.11	202.30	571.15	278.64	292.51	1.953	Collision Risk Procedures Req.
4,899.99	4,899.14	4,935.33	4,934.14	148.80	149.88	159.29	-535.15	202.30	572.12	273.44	298.68	1.915	Collision Risk Procedures Req.
4,999.99	4,999.14	5,035.33	5,034.14	151.84	152.91	159.29	-535.15	202.30	572.12	267.36	304.75	1.877	Collision Risk Procedures Req.
5,099.99	5,099.14	5,135.33	5,134.14	154.88	155.95	159.29	-535.15	202.30	572.12	261.29	310.83	1.841	Collision Risk Procedures Req.
5,151.84	5,150.98	5,187.08	5,185.86	156.45	157.52	159.23	-533.52	202.30	570.58	256.61	313.97	1.817	Collision Risk Procedures Req., CC
5,199.99	5,199.14	5,233.94	5,232.72	157.91	158.94	159.24	-533.58	202.30	570.65	253.79	316.86	1.801	Collision Risk Procedures Req.
5,299.99	5,299.14	5,331.27	5,330.04	160.95	161.90	159.25	-534.09	202.30	571.13	248.29	322.84	1.769	Collision Risk Procedures Req.
5,399.99	5,399.14	5,435.50	5,434.14	163.99	165.07	159.29	-535.15	202.30	572.12	243.06	329.05	1.739	Collision Risk Procedures Req.
5,415.00	5,414.03	5,450.39	5,449.03	164.44	165.52	159.29	-535.15	202.30	572.12	242.15	329.96	1.734	Collision Risk Procedures Req.
5,499.99	5,499.02	5,535.38	5,534.02	167.02	168.10	159.29	-535.15	202.30	572.12	236.99	335.12	1.707	Collision Risk Procedures Req.
5,599.99	5,599.02	5,635.38	5,634.02	170.06	171.14	159.29	-535.15	202.30	572.12	230.92	341.20	1.677	Collision Risk Procedures Req.
5,699.99	5,699.02	5,735.38	5,734.02	173.10	174.17	159.29	-535.15	202.30	572.12	224.85	347.27	1.647	Collision Risk Procedures Req.
5,799.99	5,799.02	5,835.38	5,834.02	176.14	177.21	159.29	-535.15	202.30	572.12	218.77	353.34	1.619	Collision Risk Procedures Req.
5,822.00	5,820.97	5,857.33	5,855.97	176.80	177.88	159.29	-535.15	202.30	572.12	217.44	354.68	1.613	Collision Risk Procedures Req.
5,830.97	5,829.94	5,866.30	5,864.94	177.08	178.15	159.29	-535.15	202.30	572.12	216.89	355.22	1.611	Collision Risk Procedures Req.
5,900.00	5,898.96	5,925.00	5,923.49	179.17	179.93	159.29	-535.15	202.30	572.21	213.17	359.04	1.594	Collision Risk Procedures Req., ES, SF
5,950.00	5,948.92	5,925.00	5,923.49	179.93	179.93	34.22	-535.15	202.30	573.90	216.03	357.87	1.604	Collision Risk Procedures Req.
6,000.00	5,998.65	5,925.00	5,923.49	179.93	179.93	34.08	-535.15	202.30	577.10	223.84	353.26	1.634	Collision Risk Procedures Req.
6,050.00	6,047.91	5,925.00	5,923.49	179.93	179.93	33.87	-535.15	202.30	581.78	235.66	346.12	1.681	Collision Risk Procedures Req.
6,100.00	6,096.48	5,925.00	5,923.49	179.93	179.93	33.60	-535.15	202.30	587.89	251.24	336.64	1.746	Collision Risk Procedures Req.
6,150.00	6,144.12	5,925.00	5,923.49	179.94	179.93	33.28	-535.15	202.30	595.34	270.26	325.09	1.831	Collision Risk Procedures Req.
6,200.00	6,190.61	5,925.00	5,923.49	179.94	179.93	32.90	-535.15	202.30	604.07	292.32	311.75	1.938	Collision Risk Procedures Req.
6,250.00	6,235.74	5,925.00	5,923.49	179.94	179.93	32.47	-535.15	202.30	613.96	317.02	296.95	2.068	
6,300.00	6,279.30	5,925.00	5,923.49	179.95	179.93	32.00	-535.15	202.30	624.93	343.89	281.04	2.224	
6,350.00	6,321.08	5,925.00	5,923.49	179.95	179.93	31.49	-535.15	202.30	636.87	372.47	264.40	2.409	
6,400.00	6,360.88	5,925.00	5,923.49	179.96	179.93	30.96	-535.15	202.30	649.66	402.26	247.41	2.626	
6,450.00	6,398.52	5,925.00	5,923.49	179.98	179.93	30.39	-535.15	202.30	663.21	432.74	230.47	2.878	
6,500.00	6,433.83	5,925.00	5,923.49	180.00	179.93	29.81	-535.15	202.30	677.40	463.39	214.01	3.165	
6,550.00	6,466.64	5,925.00	5,923.49	180.02	179.93	29.22	-535.15	202.30	692.14	493.65	198.48	3.487	
6,600.00	6,496.79	5,925.00	5,923.49	180.05	179.93	28.61	-535.15	202.30	707.31	522.94	184.37	3.836	
6,650.00	6,524.14	5,925.00	5,923.49	180.09	179.93	28.01	-535.15	202.30	722.83	550.64	172.18	4.198	
6,700.00	6,548.58	5,925.00	5,923.49	180.14	179.93	27.40	-535.15	202.30	738.60	576.17	162.42	4.547	

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

Hilcorp

Lonestar Consulting, LLC

Anticollision Report

LONESTAR CONSULTING

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 075A - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 220-INCLINOMETER

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
6,750.00	6,569.97	5,925.00	5,923.49	180.20	179.93	26.80	-535.15	202.30	754.53	598.99	155.54	4.851	
6,800.00	6,588.23	5,925.00	5,923.49	180.27	179.93	26.21	-535.15	202.30	770.55	618.71	151.84	5.075	
6,850.00	6,603.26	5,925.00	5,923.49	180.35	179.93	25.63	-535.15	202.30	786.57	635.17	151.41	5.195	
6,900.00	6,615.00	5,925.00	5,923.49	180.45	179.93	25.06	-535.15	202.30	802.53	648.44	154.09	5.208	
6,950.00	6,623.39	5,925.00	5,923.49	180.55	179.93	24.52	-535.15	202.30	818.35	658.84	159.51	5.130	
7,000.00	6,628.40	5,925.00	5,923.49	180.67	179.93	23.99	-535.15	202.30	833.97	666.77	167.19	4.988	
7,048.30	6,629.99	5,925.00	5,923.49	180.79	179.93	23.50	-535.15	202.30	848.81	672.54	176.26	4.816	
7,100.00	6,629.99	5,925.00	5,923.49	180.94	179.93	22.81	-535.15	202.30	866.29	679.14	187.14	4.629	
7,200.00	6,629.99	5,925.00	5,923.49	181.25	179.93	21.04	-535.15	202.30	909.33	700.04	209.28	4.345	
7,300.00	6,629.99	5,925.00	5,923.49	181.62	179.93	18.64	-535.15	202.30	962.95	732.45	230.50	4.178	
7,400.00	6,629.99	5,925.00	5,923.49	182.03	179.93	15.59	-535.15	202.30	1,025.26	775.90	249.36	4.112	
7,500.00	6,629.99	5,925.00	5,923.49	182.49	179.93	11.86	-535.15	202.30	1,094.49	829.00	265.49	4.123	
7,600.00	6,629.99	5,925.00	5,923.49	183.00	179.93	7.43	-535.15	202.30	1,169.12	890.13	278.98	4.191	
7,700.00	6,629.99	5,925.00	5,923.49	183.54	179.93	2.34	-535.15	202.30	1,247.84	957.66	290.17	4.300	
7,800.00	6,629.99	5,925.00	5,923.49	184.12	179.93	-3.34	-535.15	202.30	1,329.58	1,030.16	299.42	4.440	
7,900.00	6,629.99	5,925.00	5,923.49	184.73	179.93	-9.46	-535.15	202.30	1,413.45	1,106.38	307.07	4.603	
7,926.71	6,629.99	5,925.00	5,923.49	184.90	179.93	-11.15	-535.15	202.30	1,436.12	1,127.23	308.89	4.649	
8,000.00	6,629.99	5,925.00	5,923.49	185.37	179.93	-11.15	-535.15	202.30	1,498.94	1,185.49	313.45	4.782	
8,100.00	6,629.99	5,925.00	5,923.49	186.06	179.93	-11.15	-535.15	202.30	1,586.10	1,267.29	318.81	4.975	
8,200.00	6,629.99	5,925.00	5,923.49	186.79	179.93	-11.15	-535.15	202.30	1,674.69	1,351.34	323.35	5.179	
8,300.00	6,629.99	5,925.00	5,923.49	187.57	179.93	-11.15	-535.15	202.30	1,764.51	1,437.28	327.23	5.392	
8,400.00	6,629.99	5,925.00	5,923.49	188.39	179.93	-11.15	-535.15	202.30	1,855.37	1,524.81	330.56	5.613	
8,500.00	6,629.99	5,925.00	5,923.49	189.26	179.93	-11.15	-535.15	202.30	1,947.12	1,613.69	333.43	5.840	
8,600.00	6,629.99	5,925.00	5,923.49	190.17	179.93	-11.15	-535.15	202.30	2,039.65	1,703.73	335.92	6.072	
8,700.00	6,629.99	5,925.00	5,923.49	191.13	179.93	-11.15	-535.15	202.30	2,132.85	1,794.75	338.10	6.308	
8,800.00	6,629.99	5,925.00	5,923.49	192.13	179.93	-11.15	-535.15	202.30	2,226.65	1,886.64	340.01	6.549	
8,900.00	6,629.99	5,925.00	5,923.49	193.17	179.93	-11.15	-535.15	202.30	2,320.96	1,979.27	341.69	6.793	
9,000.00	6,629.99	5,925.00	5,923.49	194.25	179.93	-11.15	-535.15	202.30	2,415.73	2,072.55	343.18	7.039	
9,100.00	6,629.99	5,925.00	5,923.49	195.38	179.93	-11.15	-535.15	202.30	2,510.90	2,166.40	344.50	7.289	
9,200.00	6,629.99	5,925.00	5,923.49	196.54	179.93	-11.15	-535.15	202.30	2,606.44	2,260.76	345.68	7.540	
9,300.00	6,629.99	5,925.00	5,923.49	197.74	179.93	-11.15	-535.15	202.30	2,702.30	2,355.56	346.74	7.793	
9,400.00	6,629.99	5,925.00	5,923.49	198.99	179.93	-11.15	-535.15	202.30	2,798.45	2,450.75	347.69	8.049	
9,500.00	6,629.99	5,925.00	5,923.49	200.27	179.93	-11.15	-535.15	202.30	2,894.86	2,546.30	348.55	8.305	
9,600.00	6,629.99	5,925.00	5,923.49	201.59	179.93	-11.15	-535.15	202.30	2,991.50	2,642.17	349.33	8.563	
9,700.00	6,629.99	5,925.00	5,923.49	202.94	179.93	-11.15	-535.15	202.30	3,088.36	2,738.32	350.04	8.823	
9,800.00	6,629.99	5,925.00	5,923.49	204.34	179.93	-11.15	-535.15	202.30	3,185.42	2,834.73	350.69	9.083	
9,900.00	6,629.99	5,925.00	5,923.49	205.76	179.93	-11.15	-535.15	202.30	3,282.65	2,931.37	351.27	9.345	
10,000.00	6,629.99	5,925.00	5,923.49	207.22	179.93	-11.15	-535.15	202.30	3,380.04	3,028.23	351.81	9.608	
10,100.00	6,629.99	5,925.00	5,923.49	208.72	179.93	-11.15	-535.15	202.30	3,477.58	3,125.27	352.31	9.871	
10,200.00	6,629.99	5,925.00	5,923.49	210.25	179.93	-11.15	-535.15	202.30	3,575.26	3,222.49	352.76	10.135	
10,300.00	6,629.99	5,925.00	5,923.49	211.81	179.93	-11.15	-535.15	202.30	3,673.06	3,319.87	353.18	10.400	
10,400.00	6,629.99	5,925.00	5,923.49	213.40	179.93	-11.15	-535.15	202.30	3,770.97	3,417.40	353.57	10.665	
10,500.00	6,629.99	5,925.00	5,923.49	215.02	179.93	-11.15	-535.15	202.30	3,869.00	3,515.07	353.93	10.932	
10,600.00	6,629.99	5,925.00	5,923.49	216.68	179.93	-11.15	-535.15	202.30	3,967.12	3,612.85	354.26	11.198	
10,700.00	6,629.99	5,925.00	5,923.49	218.36	179.93	-11.15	-535.15	202.30	4,065.33	3,710.76	354.57	11.465	
10,800.00	6,629.99	5,925.00	5,923.49	220.07	179.93	-11.15	-535.15	202.30	4,163.63	3,808.77	354.86	11.733	
10,900.00	6,629.99	5,925.00	5,923.49	221.81	179.93	-11.15	-535.15	202.30	4,262.01	3,906.87	355.13	12.001	
11,000.00	6,629.99	5,925.00	5,923.49	223.58	179.93	-11.15	-535.15	202.30	4,360.46	4,005.07	355.39	12.270	
11,100.00	6,629.99	5,925.00	5,923.49	225.37	179.93	-11.15	-535.15	202.30	4,458.98	4,103.36	355.62	12.538	
11,200.00	6,629.99	5,925.00	5,923.49	227.19	179.93	-11.15	-535.15	202.30	4,557.56	4,201.72	355.84	12.808	
11,300.00	6,629.99	5,925.00	5,923.49	229.04	179.93	-11.15	-535.15	202.30	4,656.21	4,300.16	356.05	13.077	
11,400.00	6,629.99	5,925.00	5,923.49	230.91	179.93	-11.15	-535.15	202.30	4,754.91	4,398.66	356.25	13.347	

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

Lonestar Consulting, LLC

Anticollision Report

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 075A - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 220-INCLINOMETER

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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
11,500.00	6,629.99	5,925.00	5,923.49	232.80	179.93	-11.15	-535.15	202.30	4,853.67	4,497.23	356.43	13.617	
11,600.00	6,629.99	5,925.00	5,923.49	234.72	179.93	-11.15	-535.15	202.30	4,952.47	4,595.86	356.61	13.888	
11,700.00	6,629.99	5,925.00	5,923.49	236.67	179.93	-11.15	-535.15	202.30	5,051.32	4,694.55	356.77	14.158	
11,800.00	6,629.99	5,925.00	5,923.49	238.63	179.93	-11.15	-535.15	202.30	5,150.22	4,793.29	356.93	14.429	
11,900.00	6,629.99	5,925.00	5,923.49	240.62	179.93	-11.15	-535.15	202.30	5,249.16	4,892.08	357.08	14.700	
12,000.00	6,629.99	5,925.00	5,923.49	242.63	179.93	-11.15	-535.15	202.30	5,348.13	4,990.92	357.22	14.972	
12,100.00	6,629.99	5,925.00	5,923.49	244.66	179.93	-11.15	-535.15	202.30	5,447.15	5,089.80	357.35	15.243	
12,200.00	6,629.99	5,925.00	5,923.49	246.71	179.93	-11.15	-535.15	202.30	5,546.20	5,188.72	357.48	15.515	
12,300.00	6,629.99	5,925.00	5,923.49	248.78	179.93	-11.15	-535.15	202.30	5,645.28	5,287.69	357.60	15.787	
12,400.00	6,629.99	5,925.00	5,923.49	250.87	179.93	-11.15	-535.15	202.30	5,744.40	5,386.69	357.71	16.059	
12,500.00	6,629.99	5,925.00	5,923.49	252.98	179.93	-11.15	-535.15	202.30	5,843.54	5,485.72	357.82	16.331	
12,600.00	6,629.99	5,925.00	5,923.49	255.11	179.93	-11.15	-535.15	202.30	5,942.72	5,584.79	357.92	16.603	
12,700.00	6,629.99	5,925.00	5,923.49	257.25	179.93	-11.15	-535.15	202.30	6,041.92	5,683.89	358.02	16.876	
12,800.00	6,629.99	5,925.00	5,923.49	259.41	179.93	-11.15	-535.15	202.30	6,141.15	5,783.03	358.12	17.148	
12,900.00	6,629.99	5,925.00	5,923.49	261.60	179.93	-11.15	-535.15	202.30	6,240.40	5,882.19	358.21	17.421	
13,000.00	6,630.00	5,925.00	5,923.49	263.79	179.93	-11.15	-535.15	202.30	6,339.67	5,981.37	358.30	17.694	
13,100.00	6,630.00	5,925.00	5,923.49	266.01	179.93	-11.15	-535.15	202.30	6,438.97	6,080.59	358.38	17.967	
13,200.00	6,630.00	5,925.00	5,923.49	268.24	179.93	-11.15	-535.15	202.30	6,538.29	6,179.83	358.47	18.240	
13,300.00	6,630.00	5,925.00	5,923.49	270.48	179.93	-11.15	-535.15	202.30	6,637.63	6,279.09	358.54	18.513	
13,400.00	6,630.00	5,925.00	5,923.49	272.74	179.93	-11.15	-535.15	202.30	6,736.99	6,378.37	358.62	18.786	
13,500.00	6,630.00	5,925.00	5,923.49	275.02	179.93	-11.15	-535.15	202.30	6,836.37	6,477.68	358.69	19.059	
13,600.00	6,630.00	5,925.00	5,923.49	277.31	179.93	-11.15	-535.15	202.30	6,935.76	6,577.00	358.76	19.333	
13,700.00	6,630.00	5,925.00	5,923.49	279.61	179.93	-11.15	-535.15	202.30	7,035.18	6,676.35	358.83	19.606	
13,800.00	6,630.00	5,925.00	5,923.49	281.93	179.93	-11.15	-535.15	202.30	7,134.61	6,775.71	358.89	19.880	
13,900.00	6,630.00	5,925.00	5,923.49	284.26	179.93	-11.15	-535.15	202.30	7,234.05	6,875.10	358.96	20.153	
14,000.00	6,630.00	5,925.00	5,923.49	286.60	179.93	-11.15	-535.15	202.30	7,333.51	6,974.50	359.02	20.427	
14,100.00	6,630.00	5,925.00	5,923.49	288.96	179.93	-11.15	-535.15	202.30	7,432.99	7,073.91	359.07	20.700	
14,200.00	6,630.00	5,925.00	5,923.49	291.33	179.93	-11.15	-535.15	202.30	7,532.48	7,173.34	359.13	20.974	
14,300.00	6,630.00	5,925.00	5,923.49	293.71	179.93	-11.15	-535.15	202.30	7,631.98	7,272.79	359.19	21.248	
14,400.00	6,630.00	5,925.00	5,923.49	296.10	179.93	-11.15	-535.15	202.30	7,731.49	7,372.25	359.24	21.522	
14,500.00	6,630.00	5,925.00	5,923.49	298.51	179.93	-11.15	-535.15	202.30	7,831.02	7,471.73	359.29	21.796	
14,600.00	6,630.00	5,925.00	5,923.49	300.92	179.93	-11.15	-535.15	202.30	7,930.56	7,571.21	359.34	22.070	
14,700.00	6,630.00	5,925.00	5,923.49	303.35	179.93	-11.15	-535.15	202.30	8,030.11	7,670.72	359.39	22.343	
14,800.00	6,630.00	5,925.00	5,923.49	305.79	179.93	-11.15	-535.15	202.30	8,129.67	7,770.23	359.44	22.617	
14,900.00	6,630.00	5,925.00	5,923.49	308.24	179.93	-11.15	-535.15	202.30	8,229.24	7,869.75	359.49	22.892	
15,000.00	6,630.00	5,925.00	5,923.49	310.70	179.93	-11.15	-535.15	202.30	8,328.83	7,969.29	359.53	23.166	
15,100.00	6,630.00	5,925.00	5,923.49	313.16	179.93	-11.15	-535.15	202.30	8,428.42	8,068.84	359.58	23.440	
15,200.00	6,630.00	5,925.00	5,923.49	315.64	179.93	-11.15	-535.15	202.30	8,528.02	8,168.40	359.62	23.714	
15,300.00	6,630.00	5,925.00	5,923.49	318.13	179.93	-11.15	-535.15	202.30	8,627.63	8,267.96	359.67	23.988	
15,400.00	6,630.00	5,925.00	5,923.49	320.63	179.93	-11.15	-535.15	202.30	8,727.25	8,367.54	359.71	24.262	
15,500.00	6,630.00	5,925.00	5,923.49	323.13	179.93	-11.15	-535.15	202.30	8,826.88	8,467.13	359.75	24.536	
15,600.00	6,630.00	5,925.00	5,923.49	325.65	179.93	-11.15	-535.15	202.30	8,926.52	8,566.73	359.79	24.810	
15,700.00	6,630.00	5,925.00	5,923.49	328.17	179.93	-11.15	-535.15	202.30	9,026.16	8,666.33	359.83	25.085	
15,800.00	6,630.00	5,925.00	5,923.49	330.71	179.93	-11.15	-535.15	202.30	9,125.81	8,765.95	359.87	25.359	
15,900.00	6,630.00	5,925.00	5,923.49	333.25	179.93	-11.15	-535.15	202.30	9,225.47	8,865.57	359.90	25.633	
16,000.00	6,630.00	5,925.00	5,923.49	335.80	179.93	-11.15	-535.15	202.30	9,325.14	8,965.20	359.94	25.907	
16,100.00	6,630.00	5,925.00	5,923.49	338.35	179.93	-11.15	-535.15	202.30	9,424.82	9,064.84	359.98	26.182	
16,200.00	6,630.00	5,925.00	5,923.49	340.92	179.93	-11.15	-535.15	202.30	9,524.50	9,164.48	360.01	26.456	
16,227.67	6,630.00	5,925.00	5,923.49	341.63	179.93	-11.15	-535.15	202.30	9,552.08	9,192.05	360.02	26.532	

Hilcorp

Lonestar Consulting, LLC

Anticollision Report

LONESTAR CONSULTING

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 400 - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 112-INCLINOMETER

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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	2.00	2.00	0.00	0.06	33.59	604.33	401.37	725.47	725.41	0.06	N/A	
100.00	100.00	102.00	102.00	3.04	3.10	33.59	604.33	401.37	725.47	719.34	6.13	118.261	
122.00	122.00	124.00	124.00	3.70	3.77	33.59	604.33	401.37	725.47	718.00	7.47	97.108	
200.00	200.00	203.56	203.56	6.07	6.18	33.59	604.41	401.37	725.54	713.29	12.26	59.201	
293.94	293.94	295.94	295.94	8.93	8.99	33.59	604.33	401.37	725.47	707.56	17.91	40.499	
300.00	300.00	302.00	302.00	9.11	9.17	33.59	604.33	401.37	725.47	707.19	18.28	39.683	
353.00	352.97	354.97	354.97	10.72	10.78	33.59	604.33	401.37	725.47	703.97	21.50	33.744	
400.00	399.97	401.97	401.97	12.15	12.21	33.59	604.33	401.37	725.47	701.12	24.35	29.789	
473.00	472.93	474.93	474.93	14.36	14.42	33.59	604.33	401.37	725.47	696.69	28.79	25.202	
500.00	499.93	502.02	502.01	15.18	15.24	33.57	604.91	401.37	725.96	695.53	30.43	23.858	
600.00	599.93	603.02	603.01	18.22	18.31	33.57	604.81	401.37	725.88	689.34	36.53	19.869	
700.00	699.93	704.03	704.02	21.26	21.38	33.58	604.55	401.37	725.66	683.02	42.64	17.020	
800.00	799.93	802.04	801.93	24.29	24.36	33.59	604.33	401.37	725.47	676.82	48.65	14.912	
836.00	835.85	837.97	837.85	25.39	25.45	33.59	604.33	401.37	725.47	674.64	50.83	14.271	
900.00	899.85	901.97	901.85	27.33	27.39	33.59	604.33	401.37	725.47	670.75	54.72	13.258	
1,000.00	999.85	1,005.75	1,005.60	30.37	30.54	33.54	605.44	401.37	726.41	665.50	60.91	11.926	
1,100.00	1,099.85	1,111.42	1,111.24	33.40	33.75	33.59	604.30	401.37	725.51	658.36	67.15	10.805	
1,107.83	1,107.69	1,119.70	1,119.52	33.64	34.00	33.60	604.17	401.37	725.41	657.77	67.64	10.725	
1,200.00	1,199.85	1,209.07	1,208.74	36.44	36.72	33.58	604.63	401.37	725.76	652.60	73.15	9.921	
1,282.66	1,282.52	1,284.90	1,284.52	38.95	39.02	33.59	604.33	401.37	725.47	647.50	77.97	9.305	
1,300.00	1,299.85	1,302.23	1,301.85	39.48	39.54	33.59	604.33	401.37	725.47	646.45	79.02	9.181	
1,327.00	1,326.73	1,331.66	1,331.26	40.30	40.44	33.56	605.00	401.37	726.04	645.30	80.74	8.993	
1,400.00	1,399.73	1,402.20	1,401.73	42.51	42.58	33.59	604.33	401.37	725.47	640.38	85.09	8.525	
1,500.00	1,499.73	1,502.20	1,501.73	45.55	45.62	33.59	604.33	401.37	725.47	634.30	91.17	7.958	
1,600.00	1,599.73	1,605.48	1,604.98	48.59	48.75	33.54	605.37	401.37	726.35	629.01	97.34	7.462	
1,700.00	1,699.73	1,711.84	1,711.32	51.62	51.98	33.59	604.25	401.37	725.47	621.87	103.60	7.003	
1,704.45	1,704.19	1,716.58	1,716.06	51.76	52.13	33.60	604.18	401.37	725.41	621.53	103.88	6.983	
1,761.00	1,760.60	1,763.22	1,762.60	53.48	53.54	33.59	604.33	401.37	725.47	618.45	107.02	6.779	
1,800.00	1,799.60	1,802.21	1,801.60	54.66	54.73	33.59	604.33	401.37	725.47	616.08	109.39	6.632	
1,900.00	1,899.60	1,905.08	1,904.44	57.70	57.85	33.54	605.37	401.37	726.35	610.80	115.55	6.286	
2,000.00	1,999.60	2,011.66	2,011.00	60.74	61.09	33.59	604.30	401.37	725.51	603.70	121.81	5.956	
2,007.69	2,007.29	2,019.87	2,019.20	60.97	61.34	33.60	604.17	401.37	725.41	603.11	122.30	5.932 CC	
2,100.00	2,099.60	2,102.30	2,101.60	63.77	63.84	33.59	604.33	401.37	725.47	597.86	127.61	5.685	
2,200.00	2,199.60	2,202.30	2,201.60	66.81	66.88	33.59	604.33	401.37	725.47	591.79	133.69	5.427	
2,259.00	2,258.51	2,261.21	2,260.51	68.60	68.67	33.59	604.33	401.37	725.47	588.20	137.27	5.285	
2,300.00	2,299.50	2,303.09	2,302.37	69.85	69.94	33.54	605.39	401.37	726.36	586.58	139.78	5.196	
2,400.00	2,399.50	2,405.25	2,404.53	72.88	73.04	33.56	605.07	401.37	726.09	580.17	145.92	4.976	
2,500.00	2,499.50	2,507.42	2,506.70	75.92	76.14	33.59	604.38	401.37	725.53	573.47	152.06	4.771	
2,510.33	2,509.84	2,517.99	2,517.26	76.23	76.46	33.59	604.28	401.37	725.46	572.76	152.69	4.751	
2,599.99	2,599.50	2,602.26	2,601.50	78.96	79.02	33.59	604.33	401.37	725.47	567.49	157.98	4.592	
2,690.00	2,689.42	2,692.19	2,691.42	81.69	81.75	33.59	604.33	401.37	725.47	562.03	163.44	4.439	
2,699.99	2,699.42	2,702.18	2,701.42	81.99	82.06	33.59	604.33	401.37	725.47	561.42	164.05	4.422	
2,799.99	2,799.42	2,804.03	2,803.27	85.03	85.15	33.57	604.84	401.37	725.90	555.72	170.18	4.265	
2,899.99	2,899.42	2,906.08	2,905.31	88.07	88.25	33.59	604.35	401.37	725.50	549.19	176.31	4.115	
2,907.78	2,907.21	2,914.03	2,913.26	88.30	88.49	33.59	604.30	401.37	725.46	548.67	176.79	4.103	
2,999.99	2,999.42	3,002.20	3,001.42	91.10	91.17	33.59	604.33	401.37	725.47	543.20	182.27	3.980	
3,099.99	3,099.42	3,104.79	3,104.00	94.14	94.28	33.59	604.34	401.37	725.48	537.06	188.42	3.850	
3,104.47	3,103.89	3,109.38	3,108.59	94.28	94.42	33.59	604.32	401.37	725.47	536.77	188.70	3.845	
3,199.99	3,199.42	3,180.00	3,179.20	97.18	96.57	33.59	604.33	401.37	725.81	532.16	193.65	3.748 ES, SF	
3,271.00	3,270.31	3,180.00	3,179.20	99.33	96.57	33.59	604.33	401.37	731.42	537.11	194.31	3.764	
3,299.99	3,299.30	3,180.00	3,179.20	100.21	96.57	33.59	604.33	401.37	735.68	541.62	194.06	3.791	
3,399.99	3,399.30	3,180.00	3,179.20	103.25	96.57	33.59	604.33	401.37	758.71	567.62	191.08	3.971	

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

Lonestar Consulting, LLC

Anticollision Report

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 400 - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 112-INCLINOMETER

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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
3,499.99	3,499.30	3,180.00	3,179.20	106.29	96.57	33.59	604.33	401.37	793.76	608.32	185.44	4.280	
3,517.00	3,516.25	3,180.00	3,179.20	106.80	96.57	33.59	604.33	401.37	800.79	616.50	184.29	4.345	
3,599.99	3,599.25	3,180.00	3,179.20	109.32	96.57	33.59	604.33	401.37	839.30	661.27	178.03	4.714	
3,699.99	3,699.25	3,180.00	3,179.20	112.36	96.57	33.59	604.33	401.37	893.78	724.10	169.68	5.267	
3,799.99	3,799.24	3,180.00	3,179.20	115.40	96.57	33.59	604.33	401.37	955.64	794.60	161.04	5.934	
3,899.99	3,899.24	3,180.00	3,179.20	118.44	96.57	33.59	604.33	401.37	1,023.55	871.00	152.55	6.710	
3,942.00	3,941.19	3,180.00	3,179.20	119.71	96.57	33.59	604.33	401.37	1,053.56	904.45	149.11	7.066	
3,999.99	3,999.18	3,180.00	3,179.20	121.47	96.57	33.59	604.33	401.37	1,096.34	951.86	144.48	7.588	
4,099.99	4,099.18	3,180.00	3,179.20	124.51	96.57	33.59	604.33	401.37	1,173.18	1,036.23	136.95	8.567	
4,199.99	4,199.18	3,180.00	3,179.20	127.55	96.57	33.59	604.33	401.37	1,253.29	1,123.29	130.01	9.640	
4,299.99	4,299.18	3,180.00	3,179.20	130.58	96.57	33.59	604.33	401.37	1,336.09	1,212.43	123.66	10.805	
4,399.99	4,399.18	3,180.00	3,179.20	133.62	96.57	33.59	604.33	401.37	1,421.10	1,303.23	117.87	12.057	
4,412.00	4,411.15	3,180.00	3,179.20	133.98	96.57	33.59	604.33	401.37	1,431.41	1,314.19	117.21	12.212	
4,499.99	4,499.14	3,180.00	3,179.20	136.66	96.57	33.59	604.33	401.37	1,507.92	1,395.31	112.61	13.391	
4,599.99	4,599.14	3,180.00	3,179.20	139.69	96.57	33.59	604.33	401.37	1,596.31	1,488.49	107.82	14.805	
4,699.99	4,699.14	3,180.00	3,179.20	142.73	96.57	33.59	604.33	401.37	1,686.00	1,582.54	103.46	16.296	
4,799.99	4,799.14	3,180.00	3,179.20	145.77	96.57	33.59	604.33	401.37	1,776.79	1,677.30	99.49	17.859	
4,899.99	4,899.14	3,180.00	3,179.20	148.80	96.57	33.59	604.33	401.37	1,868.52	1,772.66	95.86	19.493	
4,999.99	4,999.14	3,180.00	3,179.20	151.84	96.57	33.59	604.33	401.37	1,961.06	1,868.52	92.54	21.192	
5,099.99	5,099.14	3,180.00	3,179.20	154.88	96.57	33.59	604.33	401.37	2,054.30	1,964.81	89.49	22.956	
5,199.99	5,199.14	3,180.00	3,179.20	157.91	96.57	33.59	604.33	401.37	2,148.14	2,061.46	86.69	24.781	
5,299.99	5,299.14	3,180.00	3,179.20	160.95	96.57	33.59	604.33	401.37	2,242.52	2,158.42	84.10	26.664	
5,399.99	5,399.14	3,180.00	3,179.20	163.99	96.57	33.59	604.33	401.37	2,337.37	2,255.65	81.72	28.602	
5,415.00	5,414.03	3,180.00	3,179.20	164.44	96.57	33.59	604.33	401.37	2,351.53	2,270.15	81.38	28.895	
5,499.99	5,499.02	3,180.00	3,179.20	167.02	96.57	33.59	604.33	401.37	2,432.52	2,353.00	79.52	30.590	
5,599.99	5,599.02	3,180.00	3,179.20	170.06	96.57	33.59	604.33	401.37	2,528.14	2,450.66	77.48	32.631	
5,699.99	5,699.02	3,180.00	3,179.20	173.10	96.57	33.59	604.33	401.37	2,624.09	2,548.51	75.58	34.720	
5,799.99	5,799.02	3,180.00	3,179.20	176.14	96.57	33.59	604.33	401.37	2,720.33	2,646.52	73.81	36.854	
5,822.00	5,820.97	3,180.00	3,179.20	176.80	96.57	33.59	604.33	401.37	2,741.49	2,668.05	73.44	37.328	
5,900.00	5,898.96	3,180.00	3,179.20	179.17	96.57	33.59	604.33	401.37	2,816.79	2,744.62	72.17	39.030	
5,950.00	5,948.92	3,180.00	3,179.20	179.93	96.57	-76.81	604.33	401.37	2,865.10	2,793.90	71.20	40.238	
6,000.00	5,998.65	3,180.00	3,179.20	179.93	96.57	-63.58	604.33	401.37	2,913.27	2,843.17	70.10	41.559	
6,050.00	6,047.91	3,180.00	3,179.20	179.93	96.57	-52.70	604.33	401.37	2,961.09	2,892.03	69.06	42.878	
6,100.00	6,096.48	3,180.00	3,179.20	179.93	96.57	-44.22	604.33	401.37	3,008.35	2,940.26	68.09	44.181	
6,150.00	6,144.12	3,180.00	3,179.20	179.94	96.57	-37.70	604.33	401.37	3,054.86	2,987.65	67.21	45.452	
6,200.00	6,190.61	3,180.00	3,179.20	179.94	96.57	-32.69	604.33	401.37	3,100.45	3,034.02	66.43	46.669	
6,250.00	6,235.74	3,180.00	3,179.20	179.94	96.57	-28.78	604.33	401.37	3,144.94	3,079.16	65.78	47.810	
6,300.00	6,279.30	3,180.00	3,179.20	179.95	96.57	-25.69	604.33	401.37	3,188.18	3,122.92	65.26	48.851	
6,350.00	6,321.08	3,180.00	3,179.20	179.95	96.57	-23.21	604.33	401.37	3,230.02	3,165.12	64.91	49.765	
6,400.00	6,360.88	3,180.00	3,179.20	179.96	96.57	-21.19	604.33	401.37	3,270.32	3,205.60	64.72	50.529	
6,450.00	6,398.52	3,180.00	3,179.20	179.98	96.57	-19.53	604.33	401.37	3,308.96	3,244.23	64.73	51.119	
6,500.00	6,433.83	3,180.00	3,179.20	180.00	96.57	-18.15	604.33	401.37	3,345.80	3,280.86	64.94	51.518	
6,550.00	6,466.64	3,180.00	3,179.20	180.02	96.57	-17.00	604.33	401.37	3,380.75	3,315.37	65.37	51.713	
6,600.00	6,496.79	3,180.00	3,179.20	180.05	96.57	-16.02	604.33	401.37	3,413.70	3,347.67	66.03	51.700	
6,650.00	6,524.14	3,180.00	3,179.20	180.09	96.57	-15.19	604.33	401.37	3,444.55	3,377.63	66.91	51.479	
6,700.00	6,548.58	3,180.00	3,179.20	180.14	96.57	-14.49	604.33	401.37	3,473.21	3,405.19	68.02	51.060	
6,750.00	6,569.97	3,180.00	3,179.20	180.20	96.57	-13.89	604.33	401.37	3,499.62	3,430.26	69.36	50.458	
6,800.00	6,588.23	3,180.00	3,179.20	180.27	96.57	-13.39	604.33	401.37	3,523.70	3,452.79	70.91	49.692	
6,850.00	6,603.26	3,180.00	3,179.20	180.35	96.57	-12.96	604.33	401.37	3,545.37	3,472.70	72.67	48.787	
6,900.00	6,615.00	3,180.00	3,179.20	180.45	96.57	-12.59	604.33	401.37	3,564.60	3,489.97	74.63	47.766	
6,950.00	6,623.39	3,180.00	3,179.20	180.55	96.57	-12.29	604.33	401.37	3,581.32	3,504.56	76.76	46.654	
7,000.00	6,628.40	3,180.00	3,179.20	180.67	96.57	-12.05	604.33	401.37	3,595.50	3,516.43	79.07	45.475	

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

Lonestar Consulting, LLC

Anticollision Report

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 400 - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 112-INCLINOMETER

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)	Rule Assigned: Distance Between Centres (usft)	Rule Assigned: Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,048.30	6,629.99	3,180.00	3,179.20	180.79	96.57	-11.86	604.33	401.37	3,606.74	3,525.31	81.43	44.292	
7,100.00	6,629.99	3,180.00	3,179.20	180.94	96.57	-12.30	604.33	401.37	3,617.64	3,533.62	84.02	43.057	
7,200.00	6,629.99	3,180.00	3,179.20	181.25	96.57	-13.18	604.33	401.37	3,639.60	3,550.65	88.95	40.915	
7,300.00	6,629.99	3,180.00	3,179.20	181.62	96.57	-14.10	604.33	401.37	3,662.62	3,568.85	93.77	39.060	
7,400.00	6,629.99	3,180.00	3,179.20	182.03	96.57	-15.05	604.33	401.37	3,686.57	3,588.12	98.45	37.446	
7,500.00	6,629.99	3,180.00	3,179.20	182.49	96.57	-16.04	604.33	401.37	3,711.31	3,608.33	102.98	36.038	
7,600.00	6,629.99	3,180.00	3,179.20	183.00	96.57	-17.04	604.33	401.37	3,736.71	3,629.35	107.36	34.806	
7,700.00	6,629.99	3,180.00	3,179.20	183.54	96.57	-18.07	604.33	401.37	3,762.63	3,651.06	111.57	33.724	
7,800.00	6,629.99	3,180.00	3,179.20	184.12	96.57	-19.10	604.33	401.37	3,788.94	3,673.33	115.61	32.773	
7,900.00	6,629.99	3,180.00	3,179.20	184.73	96.57	-20.14	604.33	401.37	3,815.50	3,696.02	119.48	31.934	
7,926.71	6,629.99	3,180.00	3,179.20	184.90	96.57	-20.41	604.33	401.37	3,822.62	3,702.14	120.48	31.728	
8,000.00	6,629.99	3,180.00	3,179.20	185.37	96.57	-20.41	604.33	401.37	3,842.81	3,719.56	123.26	31.178	
8,100.00	6,629.99	3,180.00	3,179.20	186.06	96.57	-20.41	604.33	401.37	3,872.43	3,745.30	127.14	30.459	
8,200.00	6,629.99	3,180.00	3,179.20	186.79	96.57	-20.41	604.33	401.37	3,904.39	3,773.30	131.10	29.783	
8,300.00	6,629.99	3,180.00	3,179.20	187.57	96.57	-20.41	604.33	401.37	3,938.63	3,803.53	135.11	29.152	
8,400.00	6,629.99	3,180.00	3,179.20	188.39	96.57	-20.41	604.33	401.37	3,975.09	3,835.95	139.14	28.569	
8,500.00	6,629.99	3,180.00	3,179.20	189.26	96.57	-20.41	604.33	401.37	4,013.71	3,870.54	143.17	28.035	
8,600.00	6,629.99	3,180.00	3,179.20	190.17	96.57	-20.41	604.33	401.37	4,054.43	3,907.25	147.18	27.547	
8,700.00	6,629.99	3,180.00	3,179.20	191.13	96.57	-20.41	604.33	401.37	4,097.19	3,946.04	151.15	27.106	
8,800.00	6,629.99	3,180.00	3,179.20	192.13	96.57	-20.41	604.33	401.37	4,141.92	3,986.85	155.07	26.709	
8,900.00	6,629.99	3,180.00	3,179.20	193.17	96.57	-20.41	604.33	401.37	4,188.56	4,029.63	158.93	26.355	
9,000.00	6,629.99	3,180.00	3,179.20	194.25	96.57	-20.41	604.33	401.37	4,237.05	4,074.34	162.71	26.041	
9,100.00	6,629.99	3,180.00	3,179.20	195.38	96.57	-20.41	604.33	401.37	4,287.32	4,120.91	166.41	25.764	
9,200.00	6,629.99	3,180.00	3,179.20	196.54	96.57	-20.41	604.33	401.37	4,339.32	4,169.30	170.02	25.523	
9,300.00	6,629.99	3,180.00	3,179.20	197.74	96.57	-20.41	604.33	401.37	4,392.97	4,219.44	173.53	25.315	
9,400.00	6,629.99	3,180.00	3,179.20	198.99	96.57	-20.41	604.33	401.37	4,448.23	4,271.27	176.95	25.138	
9,500.00	6,629.99	3,180.00	3,179.20	200.27	96.57	-20.41	604.33	401.37	4,505.03	4,324.75	180.27	24.990	
9,600.00	6,629.99	3,180.00	3,179.20	201.59	96.57	-20.41	604.33	401.37	4,563.31	4,379.82	183.49	24.869	
9,700.00	6,629.99	3,180.00	3,179.20	202.94	96.57	-20.41	604.33	401.37	4,623.02	4,436.41	186.61	24.773	
9,800.00	6,629.99	3,180.00	3,179.20	204.34	96.57	-20.41	604.33	401.37	4,684.11	4,494.48	189.63	24.701	
9,900.00	6,629.99	3,180.00	3,179.20	205.76	96.57	-20.41	604.33	401.37	4,746.52	4,553.97	192.55	24.651	
10,000.00	6,629.99	3,180.00	3,179.20	207.22	96.57	-20.41	604.33	401.37	4,810.19	4,614.83	195.36	24.622	
10,100.00	6,629.99	3,180.00	3,179.20	208.72	96.57	-20.41	604.33	401.37	4,875.09	4,677.01	198.08	24.611	
10,200.00	6,629.99	3,180.00	3,179.20	210.25	96.57	-20.41	604.33	401.37	4,941.16	4,740.45	200.71	24.619	
10,300.00	6,629.99	3,180.00	3,179.20	211.81	96.57	-20.41	604.33	401.37	5,008.35	4,805.11	203.24	24.643	
10,400.00	6,629.99	3,180.00	3,179.20	213.40	96.57	-20.41	604.33	401.37	5,076.62	4,870.95	205.67	24.683	
10,500.00	6,629.99	3,180.00	3,179.20	215.02	96.57	-20.41	604.33	401.37	5,145.94	4,937.91	208.02	24.737	
10,600.00	6,629.99	3,180.00	3,179.20	216.68	96.57	-20.41	604.33	401.37	5,216.24	5,005.96	210.29	24.805	
10,700.00	6,629.99	3,180.00	3,179.20	218.36	96.57	-20.41	604.33	401.37	5,287.51	5,075.04	212.46	24.886	
10,800.00	6,629.99	3,180.00	3,179.20	220.07	96.57	-20.41	604.33	401.37	5,359.69	5,145.13	214.56	24.980	
10,900.00	6,629.99	3,180.00	3,179.20	221.81	96.57	-20.41	604.33	401.37	5,432.75	5,216.17	216.58	25.084	
11,000.00	6,629.99	3,180.00	3,179.20	223.58	96.57	-20.41	604.33	401.37	5,506.66	5,288.14	218.53	25.199	
11,100.00	6,629.99	3,180.00	3,179.20	225.37	96.57	-20.41	604.33	401.37	5,581.39	5,360.99	220.40	25.324	
11,200.00	6,629.99	3,180.00	3,179.20	227.19	96.57	-20.41	604.33	401.37	5,656.89	5,434.69	222.20	25.459	
11,300.00	6,629.99	3,180.00	3,179.20	229.04	96.57	-20.41	604.33	401.37	5,733.15	5,509.21	223.93	25.602	
11,400.00	6,629.99	3,180.00	3,179.20	230.91	96.57	-20.41	604.33	401.37	5,810.12	5,584.52	225.60	25.754	
11,500.00	6,629.99	3,180.00	3,179.20	232.80	96.57	-20.41	604.33	401.37	5,887.79	5,660.58	227.21	25.914	
11,600.00	6,629.99	3,180.00	3,179.20	234.72	96.57	-20.41	604.33	401.37	5,966.12	5,737.37	228.75	26.081	
11,700.00	6,629.99	3,180.00	3,179.20	236.67	96.57	-20.41	604.33	401.37	6,045.09	5,814.85	230.24	26.256	
11,800.00	6,629.99	3,180.00	3,179.20	238.63	96.57	-20.41	604.33	401.37	6,124.68	5,893.00	231.67	26.437	
11,900.00	6,629.99	3,180.00	3,179.20	240.62	96.57	-20.41	604.33	401.37	6,204.85	5,971.80	233.05	26.624	
12,000.00	6,629.99	3,180.00	3,179.20	242.63	96.57	-20.41	604.33	401.37	6,285.60	6,051.21	234.38	26.818	

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

Lonestar Consulting, LLC

Anticollision Report

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 400 - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 112-INCLINOMETER

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
12,100.00	6,629.99	3,180.00	3,179.20	244.66	96.57	-20.41	604.33	401.37	6,366.89	6,131.22	235.67	27.017	
12,200.00	6,629.99	3,180.00	3,179.20	246.71	96.57	-20.41	604.33	401.37	6,448.71	6,211.81	236.90	27.221	
12,300.00	6,629.99	3,180.00	3,179.20	248.78	96.57	-20.41	604.33	401.37	6,531.03	6,292.94	238.09	27.431	
12,400.00	6,629.99	3,180.00	3,179.20	250.87	96.57	-20.41	604.33	401.37	6,613.84	6,374.60	239.24	27.646	
12,500.00	6,629.99	3,180.00	3,179.20	252.98	96.57	-20.41	604.33	401.37	6,697.12	6,456.78	240.34	27.865	
12,600.00	6,629.99	3,180.00	3,179.20	255.11	96.57	-20.41	604.33	401.37	6,780.85	6,539.44	241.41	28.089	
12,700.00	6,629.99	3,180.00	3,179.20	257.25	96.57	-20.41	604.33	401.37	6,865.02	6,622.58	242.44	28.317	
12,800.00	6,629.99	3,180.00	3,179.20	259.41	96.57	-20.41	604.33	401.37	6,949.61	6,706.18	243.43	28.549	
12,900.00	6,629.99	3,180.00	3,179.20	261.60	96.57	-20.41	604.33	401.37	7,034.60	6,790.21	244.39	28.784	
13,000.00	6,630.00	3,180.00	3,179.20	263.79	96.57	-20.41	604.33	401.37	7,119.98	6,874.67	245.31	29.024	
13,100.00	6,630.00	3,180.00	3,179.20	266.01	96.57	-20.41	604.33	401.37	7,205.74	6,959.53	246.21	29.267	
13,200.00	6,630.00	3,180.00	3,179.20	268.24	96.57	-20.41	604.33	401.37	7,291.86	7,044.79	247.07	29.513	
13,300.00	6,630.00	3,180.00	3,179.20	270.48	96.57	-20.41	604.33	401.37	7,378.33	7,130.42	247.90	29.763	
13,400.00	6,630.00	3,180.00	3,179.20	272.74	96.57	-20.41	604.33	401.37	7,465.14	7,216.43	248.71	30.016	
13,500.00	6,630.00	3,180.00	3,179.20	275.02	96.57	-20.41	604.33	401.37	7,552.27	7,302.78	249.49	30.271	
13,600.00	6,630.00	3,180.00	3,179.20	277.31	96.57	-20.41	604.33	401.37	7,639.72	7,389.48	250.24	30.530	
13,700.00	6,630.00	3,180.00	3,179.20	279.61	96.57	-20.41	604.33	401.37	7,727.47	7,476.51	250.97	30.791	
13,800.00	6,630.00	3,180.00	3,179.20	281.93	96.57	-20.41	604.33	401.37	7,815.52	7,563.85	251.67	31.054	
13,900.00	6,630.00	3,180.00	3,179.20	284.26	96.57	-20.41	604.33	401.37	7,903.86	7,651.50	252.35	31.320	
14,000.00	6,630.00	3,180.00	3,179.20	286.60	96.57	-20.41	604.33	401.37	7,992.46	7,739.45	253.01	31.589	
14,100.00	6,630.00	3,180.00	3,179.20	288.96	96.57	-20.41	604.33	401.37	8,081.34	7,827.68	253.65	31.860	
14,200.00	6,630.00	3,180.00	3,179.20	291.33	96.57	-20.41	604.33	401.37	8,170.47	7,916.20	254.27	32.133	
14,300.00	6,630.00	3,180.00	3,179.20	293.71	96.57	-20.41	604.33	401.37	8,259.85	8,004.98	254.87	32.408	
14,400.00	6,630.00	3,180.00	3,179.20	296.10	96.57	-20.41	604.33	401.37	8,349.47	8,094.02	255.45	32.685	
14,500.00	6,630.00	3,180.00	3,179.20	298.51	96.57	-20.41	604.33	401.37	8,439.32	8,183.31	256.02	32.964	
14,600.00	6,630.00	3,180.00	3,179.20	300.92	96.57	-20.41	604.33	401.37	8,529.40	8,272.84	256.56	33.245	
14,700.00	6,630.00	3,180.00	3,179.20	303.35	96.57	-20.41	604.33	401.37	8,619.70	8,362.61	257.09	33.528	
14,800.00	6,630.00	3,180.00	3,179.20	305.79	96.57	-20.41	604.33	401.37	8,710.21	8,452.61	257.61	33.812	
14,900.00	6,630.00	3,180.00	3,179.20	308.24	96.57	-20.41	604.33	401.37	8,800.93	8,542.82	258.10	34.098	
15,000.00	6,630.00	3,180.00	3,179.20	310.70	96.57	-20.41	604.33	401.37	8,891.84	8,633.25	258.59	34.386	
15,100.00	6,630.00	3,180.00	3,179.20	313.16	96.57	-20.41	604.33	401.37	8,982.95	8,723.89	259.06	34.675	
15,200.00	6,630.00	3,180.00	3,179.20	315.64	96.57	-20.41	604.33	401.37	9,074.25	8,814.73	259.51	34.966	
15,300.00	6,630.00	3,180.00	3,179.20	318.13	96.57	-20.41	604.33	401.37	9,165.72	8,905.77	259.96	35.259	
15,400.00	6,630.00	3,180.00	3,179.20	320.63	96.57	-20.41	604.33	401.37	9,257.38	8,996.99	260.39	35.552	
15,500.00	6,630.00	3,180.00	3,179.20	323.13	96.57	-20.41	604.33	401.37	9,349.20	9,088.39	260.81	35.847	
15,600.00	6,630.00	3,180.00	3,179.20	325.65	96.57	-20.41	604.33	401.37	9,441.19	9,179.98	261.21	36.144	
15,700.00	6,630.00	3,180.00	3,179.20	328.17	96.57	-20.41	604.33	401.37	9,533.34	9,271.73	261.61	36.441	
15,800.00	6,630.00	3,180.00	3,179.20	330.71	96.57	-20.41	604.33	401.37	9,625.65	9,363.66	261.99	36.740	
15,900.00	6,630.00	3,180.00	3,179.20	333.25	96.57	-20.41	604.33	401.37	9,718.11	9,455.74	262.37	37.040	
16,000.00	6,630.00	3,180.00	3,179.20	335.80	96.57	-20.41	604.33	401.37	9,810.72	9,547.99	262.73	37.341	
16,100.00	6,630.00	3,180.00	3,179.20	338.35	96.57	-20.41	604.33	401.37	9,903.47	9,640.39	263.09	37.643	
16,200.00	6,630.00	3,180.00	3,179.20	340.92	96.57	-20.41	604.33	401.37	9,996.37	9,732.93	263.43	37.946	

Lonestar Consulting, LLC

Anticollision Report

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 404 - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 2404-INCLINOMETER

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)	Rule Assigned: 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	105.31	-833.51	3,045.12	3,159.23				
100.00	100.00	0.00	0.00	3.04	0.00	105.31	-833.51	3,045.12	3,157.17	3,154.14	3.04	1,039.554	
122.00	122.00	7.00	7.00	3.70	0.21	105.31	-833.51	3,045.12	3,157.14	3,153.22	3.92	805.854	
200.00	200.00	85.00	85.00	6.07	2.58	105.31	-833.51	3,045.12	3,157.14	3,148.48	8.66	364.774	
300.00	300.00	185.00	185.00	9.11	5.62	105.31	-833.51	3,045.12	3,157.14	3,142.41	14.73	214.355	
353.00	352.97	237.97	237.97	10.72	7.23	105.31	-833.51	3,045.12	3,157.14	3,139.19	17.95	175.919	
400.00	399.97	284.97	284.97	12.15	8.65	105.31	-833.51	3,045.12	3,157.14	3,136.34	20.80	151.778	
473.00	472.93	357.93	357.93	14.36	10.87	105.31	-833.51	3,045.12	3,157.14	3,131.90	25.23	125.117	
500.00	499.93	384.93	384.93	15.18	11.69	105.31	-833.51	3,045.12	3,157.14	3,130.26	26.87	117.482	
600.00	599.93	484.93	484.93	18.22	14.73	105.31	-833.51	3,045.12	3,157.14	3,124.19	32.95	95.825	
700.00	699.93	584.93	584.93	21.26	17.76	105.31	-833.51	3,045.12	3,157.14	3,118.12	39.02	80.909	
800.00	799.93	684.93	684.93	24.29	20.80	105.31	-833.51	3,045.12	3,157.14	3,112.04	45.09	70.012	
836.00	835.85	720.85	720.85	25.39	21.89	105.31	-833.51	3,045.12	3,157.14	3,109.86	47.28	66.777	
900.00	899.85	784.85	784.85	27.33	23.84	105.31	-833.51	3,045.12	3,157.14	3,105.97	51.17	61.704	
1,000.00	999.85	884.85	884.85	30.37	26.87	105.31	-833.51	3,045.12	3,157.14	3,099.90	57.24	55.157	
1,100.00	1,099.85	984.85	984.85	33.40	29.91	105.31	-833.51	3,045.12	3,157.14	3,093.83	63.31	49.866	
1,200.00	1,199.85	1,084.85	1,084.85	36.44	32.95	105.31	-833.51	3,045.12	3,157.14	3,087.75	69.39	45.501	
1,300.00	1,299.85	1,184.85	1,184.85	39.48	35.98	105.31	-833.51	3,045.12	3,157.14	3,081.68	75.46	41.839	
1,327.00	1,326.73	1,211.73	1,211.73	40.30	36.80	105.31	-833.51	3,045.12	3,157.14	3,080.04	77.10	40.951	
1,400.00	1,399.73	1,284.73	1,284.73	42.51	39.02	105.31	-833.51	3,045.12	3,157.14	3,075.61	81.53	38.724	
1,500.00	1,499.73	1,384.73	1,384.73	45.55	42.05	105.31	-833.51	3,045.12	3,157.14	3,069.53	87.60	36.039	
1,600.00	1,599.73	1,484.73	1,484.73	48.59	45.09	105.31	-833.51	3,045.12	3,157.14	3,063.46	93.68	33.702	
1,700.00	1,699.73	1,584.73	1,584.73	51.62	48.13	105.31	-833.51	3,045.12	3,157.14	3,057.39	99.75	31.650	
1,761.00	1,760.60	1,645.60	1,645.60	53.48	49.97	105.31	-833.51	3,045.12	3,157.14	3,053.69	103.45	30.518	
1,800.00	1,799.60	1,684.60	1,684.60	54.66	51.16	105.31	-833.51	3,045.12	3,157.14	3,051.32	105.82	29.835	
1,900.00	1,899.60	1,784.60	1,784.60	57.70	54.20	105.31	-833.51	3,045.12	3,157.14	3,045.24	111.89	28.215	
2,000.00	1,999.60	1,884.60	1,884.60	60.74	57.23	105.31	-833.51	3,045.12	3,157.14	3,039.17	117.97	26.763	
2,100.00	2,099.60	1,984.60	1,984.60	63.77	60.27	105.31	-833.51	3,045.12	3,157.14	3,033.10	124.04	25.452	
2,200.00	2,199.60	2,084.60	2,084.60	66.81	63.31	105.31	-833.51	3,045.12	3,157.14	3,027.02	130.12	24.264	
2,259.00	2,258.51	2,143.51	2,143.51	68.60	65.10	105.31	-833.51	3,045.12	3,157.14	3,023.44	133.70	23.614	
2,300.00	2,299.50	2,184.50	2,184.50	69.85	66.34	105.31	-833.51	3,045.12	3,157.14	3,020.95	136.19	23.183	
2,400.00	2,399.50	2,284.50	2,284.50	72.88	69.38	105.31	-833.51	3,045.12	3,157.14	3,014.88	142.26	22.193	
2,500.00	2,499.50	2,384.50	2,384.50	75.92	72.41	105.31	-833.51	3,045.12	3,157.14	3,008.80	148.33	21.284	
2,599.99	2,599.50	2,485.37	2,484.50	78.96	75.47	105.31	-833.51	3,045.12	3,157.14	3,002.71	154.43	20.444	
2,690.00	2,689.42	2,577.85	2,574.42	81.69	78.21	105.31	-833.51	3,045.12	3,157.14	2,997.23	159.90	19.744	
2,694.34	2,693.76	2,581.08	2,577.45	81.82	78.31	105.29	-832.35	3,045.12	3,156.83	2,996.70	160.13	19.714	
2,699.99	2,699.42	2,581.61	2,577.97	81.99	78.32	105.29	-832.35	3,045.12	3,156.84	2,996.52	160.32	19.691	
2,799.99	2,799.42	2,701.24	2,682.79	85.03	81.57	105.28	-831.67	3,045.12	3,156.65	2,990.05	166.60	18.947	
2,831.37	2,830.79	2,739.53	2,713.90	85.98	82.51	105.25	-830.28	3,045.12	3,156.29	2,987.79	168.49	18.732	
2,892.32	2,891.74	2,824.20	2,775.00	87.83	84.49	105.24	-829.52	3,045.12	3,156.09	2,983.76	172.32	18.315 CC	
2,899.99	2,899.42	2,824.77	2,775.51	88.07	84.50	105.24	-829.52	3,045.12	3,156.10	2,983.53	172.57	18.289	
2,999.99	2,999.42	3,005.85	2,884.42	91.10	88.39	105.31	-833.51	3,045.12	3,157.14	2,977.64	179.49	17.589	
3,099.99	3,099.42	3,406.42	2,984.42	94.14	93.68	105.31	-833.51	3,045.12	3,157.14	2,969.32	187.82	16.809	
3,107.99	3,107.41	3,439.42	2,991.61	94.38	94.15	105.29	-832.56	3,045.12	3,156.89	2,968.36	188.53	16.745	
3,199.99	3,199.42	3,734.00	3,051.82	97.18	98.62	105.31	-833.51	3,045.12	3,157.31	2,961.52	195.79	16.126	
3,271.00	3,270.31	3,734.00	3,051.82	99.33	98.62	105.31	-833.51	3,045.12	3,158.83	2,960.98	197.85	15.966 ES	
3,299.99	3,299.30	3,734.00	3,051.82	100.21	98.62	105.31	-833.51	3,045.12	3,159.92	2,961.25	198.66	15.906	
3,399.99	3,399.30	3,734.00	3,051.82	103.25	98.62	105.31	-833.51	3,045.12	3,165.69	2,964.35	201.33	15.724	
3,499.99	3,499.30	3,734.00	3,051.82	106.29	98.62	105.31	-833.51	3,045.12	3,174.60	2,970.81	203.79	15.578	
3,517.00	3,516.25	3,734.00	3,051.82	106.80	98.62	105.31	-833.51	3,045.12	3,176.42	2,972.23	204.18	15.557	
3,599.99	3,599.25	3,734.00	3,051.82	109.32	98.62	105.31	-833.51	3,045.12	3,186.61	2,980.58	206.03	15.467	
3,699.99	3,699.25	3,734.00	3,051.82	112.36	98.62	105.31	-833.51	3,045.12	3,201.72	2,993.66	208.05	15.389	

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

Lonestar Consulting, LLC

Anticollision Report

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 404 - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 2404-INCLINOMETER

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
3,799.99	3,799.24	3,734.00	3,051.82	115.40	98.62	105.31	-833.51	3,045.12	3,219.86	3,009.99	209.86	15.343	
3,899.99	3,899.24	3,734.00	3,051.82	118.44	98.62	105.31	-833.51	3,045.12	3,240.98	3,029.52	211.46	15.327 SF	
3,942.00	3,941.19	3,734.00	3,051.82	119.71	98.62	105.31	-833.51	3,045.12	3,250.72	3,038.65	212.06	15.329	
3,999.99	3,999.18	3,734.00	3,051.82	121.47	98.62	105.31	-833.51	3,045.12	3,265.02	3,052.18	212.84	15.340	
4,099.99	4,099.18	3,734.00	3,051.82	124.51	98.62	105.31	-833.51	3,045.12	3,291.93	3,077.91	214.02	15.382	
4,199.99	4,199.18	3,734.00	3,051.82	127.55	98.62	105.31	-833.51	3,045.12	3,321.64	3,106.64	215.00	15.450	
4,299.99	4,299.18	3,734.00	3,051.82	130.58	98.62	105.31	-833.51	3,045.12	3,354.07	3,138.28	215.78	15.544	
4,399.99	4,399.18	3,734.00	3,051.82	133.62	98.62	105.31	-833.51	3,045.12	3,389.13	3,172.75	216.38	15.663	
4,412.00	4,411.15	3,734.00	3,051.82	133.98	98.62	105.31	-833.51	3,045.12	3,393.50	3,177.06	216.45	15.678	
4,499.99	4,499.14	3,734.00	3,051.82	136.66	98.62	105.31	-833.51	3,045.12	3,426.75	3,209.93	216.81	15.805	
4,599.99	4,599.14	3,734.00	3,051.82	139.69	98.62	105.31	-833.51	3,045.12	3,466.85	3,249.77	217.08	15.970	
4,699.99	4,699.14	3,734.00	3,051.82	142.73	98.62	105.31	-833.51	3,045.12	3,509.35	3,292.16	217.19	16.158	
4,799.99	4,799.14	3,734.00	3,051.82	145.77	98.62	105.31	-833.51	3,045.12	3,554.15	3,336.99	217.16	16.366	
4,899.99	4,899.14	3,734.00	3,051.82	148.80	98.62	105.31	-833.51	3,045.12	3,601.17	3,384.18	217.00	16.595	
4,999.99	4,999.14	3,734.00	3,051.82	151.84	98.62	105.31	-833.51	3,045.12	3,650.33	3,433.62	216.71	16.844	
5,099.99	5,099.14	3,734.00	3,051.82	154.88	98.62	105.31	-833.51	3,045.12	3,701.54	3,485.22	216.32	17.112	
5,199.99	5,199.14	3,734.00	3,051.82	157.91	98.62	105.31	-833.51	3,045.12	3,754.71	3,538.89	215.82	17.398	
5,299.99	5,299.14	3,734.00	3,051.82	160.95	98.62	105.31	-833.51	3,045.12	3,809.76	3,594.54	215.23	17.701	
5,399.99	5,399.14	3,734.00	3,051.82	163.99	98.62	105.31	-833.51	3,045.12	3,866.62	3,652.07	214.56	18.022	
5,415.00	5,414.03	3,734.00	3,051.82	164.44	98.62	105.31	-833.51	3,045.12	3,875.24	3,660.79	214.45	18.070	
5,499.99	5,499.02	3,734.00	3,051.82	167.02	98.62	105.31	-833.51	3,045.12	3,925.13	3,711.32	213.81	18.358	
5,599.99	5,599.02	3,734.00	3,051.82	170.06	98.62	105.31	-833.51	3,045.12	3,985.36	3,772.36	213.00	18.710	
5,699.99	5,699.02	3,734.00	3,051.82	173.10	98.62	105.31	-833.51	3,045.12	4,047.17	3,835.03	212.13	19.078	
5,799.99	5,799.02	3,734.00	3,051.82	176.14	98.62	105.31	-833.51	3,045.12	4,110.47	3,899.26	211.22	19.461	
5,822.00	5,820.97	3,734.00	3,051.82	176.80	98.62	105.31	-833.51	3,045.12	4,124.56	3,913.55	211.01	19.547	
5,900.00	5,898.96	3,734.00	3,051.82	179.17	98.62	105.31	-833.51	3,045.12	4,175.18	3,964.92	210.26	19.858	
5,950.00	5,948.92	3,734.00	3,051.82	179.93	98.62	-18.64	-833.51	3,045.12	4,206.84	3,997.70	209.14	20.115	
6,000.00	5,998.65	3,734.00	3,051.82	179.93	98.62	-17.75	-833.51	3,045.12	4,236.30	4,028.93	207.38	20.428	
6,050.00	6,047.91	3,734.00	3,051.82	179.93	98.62	-16.99	-833.51	3,045.12	4,263.48	4,057.94	205.54	20.743	
6,100.00	6,096.48	3,734.00	3,051.82	179.93	98.62	-16.35	-833.51	3,045.12	4,288.30	4,084.66	203.64	21.059	
6,150.00	6,144.12	3,734.00	3,051.82	179.94	98.62	-15.80	-833.51	3,045.12	4,310.68	4,109.01	201.67	21.375	
6,200.00	6,190.61	3,734.00	3,051.82	179.94	98.62	-15.35	-833.51	3,045.12	4,330.55	4,130.91	199.64	21.691	
6,250.00	6,235.74	3,734.00	3,051.82	179.94	98.62	-14.97	-833.51	3,045.12	4,347.86	4,150.29	197.57	22.007	
6,300.00	6,279.30	3,734.00	3,051.82	179.95	98.62	-14.66	-833.51	3,045.12	4,362.56	4,167.11	195.44	22.321	
6,350.00	6,321.08	3,734.00	3,051.82	179.95	98.62	-14.42	-833.51	3,045.12	4,374.60	4,181.32	193.28	22.633	
6,400.00	6,360.88	3,734.00	3,051.82	179.96	98.62	-14.23	-833.51	3,045.12	4,383.95	4,192.87	191.09	22.942	
6,450.00	6,398.52	3,734.00	3,051.82	179.98	98.62	-14.10	-833.51	3,045.12	4,390.59	4,201.73	188.86	23.248	
6,500.00	6,433.83	3,734.00	3,051.82	180.00	98.62	-14.03	-833.51	3,045.12	4,394.49	4,207.87	186.62	23.548	
6,510.58	6,440.98	3,734.00	3,051.82	180.00	98.62	-14.02	-833.51	3,045.12	4,394.97	4,208.82	186.14	23.611	
6,550.00	6,466.64	3,734.00	3,051.82	180.02	98.62	-14.01	-833.51	3,045.12	4,395.65	4,211.29	184.36	23.842	
6,600.00	6,496.79	3,734.00	3,051.82	180.05	98.62	-14.04	-833.51	3,045.12	4,394.06	4,211.96	182.10	24.130	
6,616.04	6,505.87	3,734.00	3,051.82	180.07	98.62	-14.06	-833.51	3,045.12	4,392.96	4,211.59	181.37	24.220	
6,650.00	6,524.14	3,734.00	3,051.82	180.09	98.62	-14.12	-833.51	3,045.12	4,389.72	4,209.88	179.84	24.409	
6,667.77	6,533.17	3,734.00	3,051.82	180.11	98.62	-14.16	-833.51	3,045.12	4,387.52	4,208.48	179.04	24.506	
6,700.00	6,548.58	3,734.00	3,051.82	180.14	98.62	-14.26	-833.51	3,045.12	4,382.65	4,205.06	177.59	24.679	
6,718.95	6,557.05	3,734.00	3,051.82	180.16	98.62	-14.32	-833.51	3,045.12	4,379.26	4,202.52	176.74	24.778	
6,750.00	6,569.97	3,734.00	3,051.82	180.20	98.62	-14.45	-833.51	3,045.12	4,372.87	4,197.52	175.35	24.937	
6,769.80	6,577.58	3,734.00	3,051.82	180.23	98.62	-14.54	-833.51	3,045.12	4,368.26	4,193.78	174.48	25.036	
6,800.00	6,588.23	3,734.00	3,051.82	180.27	98.62	-14.70	-833.51	3,045.12	4,360.41	4,187.26	173.15	25.183	
6,820.40	6,594.76	3,734.00	3,051.82	180.30	98.62	-14.83	-833.51	3,045.12	4,354.56	4,182.30	172.26	25.280	
6,850.00	6,603.26	3,734.00	3,051.82	180.35	98.62	-15.02	-833.51	3,045.12	4,345.29	4,174.32	170.97	25.415	
6,870.85	6,608.56	3,734.00	3,051.82	180.39	98.62	-15.18	-833.51	3,045.12	4,338.22	4,168.13	170.08	25.507	

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

Hilcorp

Lonestar Consulting, LLC

Anticollision Report

LONESTAR CONSULTING

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 404 - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 2404-INCLINOMETER

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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,900.00	6,615.00	3,734.00	3,051.82	180.45	98.62	-15.41	-833.51	3,045.12	4,327.57	4,158.73	168.85	25.630	
6,921.18	6,618.97	3,734.00	3,051.82	180.49	98.62	-15.60	-833.51	3,045.12	4,319.29	4,151.33	167.96	25.716	
6,950.00	6,623.39	3,734.00	3,051.82	180.55	98.62	-15.88	-833.51	3,045.12	4,307.30	4,140.53	166.77	25.828	
6,971.42	6,625.95	3,734.00	3,051.82	180.60	98.62	-16.11	-833.51	3,045.12	4,297.84	4,131.95	165.90	25.907	
7,000.00	6,628.40	3,734.00	3,051.82	180.67	98.62	-16.44	-833.51	3,045.12	4,284.53	4,119.77	164.75	26.006	
7,021.59	6,629.51	3,734.00	3,051.82	180.72	98.62	-16.71	-833.51	3,045.12	4,273.94	4,110.03	163.91	26.076	
7,048.30	6,629.99	3,734.00	3,051.82	180.79	98.62	-17.08	-833.51	3,045.12	4,260.23	4,097.35	162.87	26.157	
7,069.28	6,629.99	3,734.00	3,051.82	180.85	98.62	-16.58	-833.51	3,045.12	4,249.19	4,087.12	162.07	26.219	
7,100.00	6,629.99	3,734.00	3,051.82	180.94	98.62	-15.85	-833.51	3,045.12	4,233.02	4,072.15	160.87	26.313	
7,122.52	6,629.99	3,734.00	3,051.82	181.00	98.62	-15.31	-833.51	3,045.12	4,221.18	4,061.20	159.98	26.386	
7,200.00	6,629.99	3,734.00	3,051.82	181.25	98.62	-13.46	-833.51	3,045.12	4,180.51	4,023.70	156.81	26.659	
7,233.85	6,629.99	3,734.00	3,051.82	181.37	98.62	-12.65	-833.51	3,045.12	4,162.80	4,007.41	155.38	26.790	
7,300.00	6,629.99	3,734.00	3,051.82	181.62	98.62	-11.07	-833.51	3,045.12	4,128.34	3,975.83	152.51	27.068	
7,333.58	6,629.99	3,734.00	3,051.82	181.76	98.62	-10.27	-833.51	3,045.12	4,110.95	3,959.94	151.02	27.222	
7,400.00	6,629.99	3,734.00	3,051.82	182.03	98.62	-8.70	-833.51	3,045.12	4,076.80	3,928.83	147.98	27.551	
7,433.24	6,629.99	3,734.00	3,051.82	182.18	98.62	-7.92	-833.51	3,045.12	4,059.86	3,913.44	146.41	27.729	
7,500.00	6,629.99	3,734.00	3,051.82	182.49	98.62	-6.37	-833.51	3,045.12	4,026.17	3,882.97	143.19	28.117	
7,532.85	6,629.99	3,734.00	3,051.82	182.66	98.62	-5.62	-833.51	3,045.12	4,009.78	3,868.21	141.57	28.324	
7,600.00	6,629.99	3,734.00	3,051.82	183.00	98.62	-4.11	-833.51	3,045.12	3,976.72	3,838.55	138.17	28.781	
7,632.39	6,629.99	3,734.00	3,051.82	183.17	98.62	-3.39	-833.51	3,045.12	3,961.01	3,824.51	136.50	29.019	
7,700.00	6,629.99	3,734.00	3,051.82	183.54	98.62	-1.92	-833.51	3,045.12	3,928.76	3,795.83	132.93	29.556	
7,731.87	6,629.99	3,734.00	3,051.82	183.73	98.62	-1.25	-833.51	3,045.12	3,913.83	3,782.63	131.21	29.829	
7,800.00	6,629.99	3,734.00	3,051.82	184.12	98.62	0.16	-833.51	3,045.12	3,882.57	3,755.10	127.47	30.459	
7,831.28	6,629.99	3,734.00	3,051.82	184.31	98.62	0.79	-833.51	3,045.12	3,868.53	3,742.81	125.72	30.771	
7,900.00	6,629.99	3,734.00	3,051.82	184.73	98.62	2.13	-833.51	3,045.12	3,838.44	3,716.62	121.83	31.508	
7,926.71	6,629.99	3,734.00	3,051.82	184.90	98.62	2.63	-833.51	3,045.12	3,827.04	3,706.75	120.29	31.814	
7,930.63	6,629.99	3,734.00	3,051.82	184.92	98.62	2.63	-833.51	3,045.12	3,825.38	3,705.32	120.07	31.861	
7,937.38	6,629.99	3,734.00	3,051.82	184.97	98.62	2.63	-833.51	3,045.12	3,822.54	3,702.86	119.68	31.940	
8,000.00	6,629.99	3,734.00	3,051.82	185.37	98.62	2.63	-833.51	3,045.12	3,796.58	3,680.55	116.03	32.721	
8,021.60	6,629.99	3,734.00	3,051.82	185.52	98.62	2.63	-833.51	3,045.12	3,787.83	3,673.07	114.76	33.008	
8,100.00	6,629.99	3,734.00	3,051.82	186.06	98.62	2.63	-833.51	3,045.12	3,756.93	3,646.85	110.08	34.130	
8,129.33	6,629.99	3,734.00	3,051.82	186.27	98.62	2.63	-833.51	3,045.12	3,745.73	3,637.42	108.30	34.585	
8,200.00	6,629.99	3,734.00	3,051.82	186.79	98.62	2.63	-833.51	3,045.12	3,719.54	3,615.56	103.98	35.771	
8,238.67	6,629.99	3,734.00	3,051.82	187.09	98.62	2.63	-833.51	3,045.12	3,705.71	3,604.12	101.59	36.477	
8,300.00	6,629.99	3,734.00	3,051.82	187.57	98.62	2.63	-833.51	3,045.12	3,684.49	3,586.73	97.76	37.689	
8,338.00	6,629.99	3,734.00	3,051.82	187.88	98.62	2.63	-833.51	3,045.12	3,671.79	3,576.43	95.36	38.503	
8,400.00	6,629.99	3,734.00	3,051.82	188.39	98.62	2.63	-833.51	3,045.12	3,651.84	3,560.41	91.43	39.942	
8,437.32	6,629.99	3,734.00	3,051.82	188.71	98.62	2.63	-833.51	3,045.12	3,640.28	3,551.24	89.04	40.882	
8,500.00	6,629.99	3,734.00	3,051.82	189.26	98.62	2.63	-833.51	3,045.12	3,621.66	3,536.64	85.02	42.600	
8,536.63	6,629.99	3,734.00	3,051.82	189.59	98.62	2.63	-833.51	3,045.12	3,611.23	3,528.58	82.65	43.692	
8,600.00	6,629.99	3,734.00	3,051.82	190.17	98.62	2.63	-833.51	3,045.12	3,594.01	3,515.45	78.56	45.751	
8,635.93	6,629.99	3,734.00	3,051.82	190.51	98.62	2.63	-833.51	3,045.12	3,584.70	3,508.47	76.23	47.024	
8,700.00	6,629.99	3,734.00	3,051.82	191.13	98.62	2.63	-833.51	3,045.12	3,568.94	3,496.85	72.09	49.505	
8,735.22	6,629.99	3,734.00	3,051.82	191.48	98.62	2.63	-833.51	3,045.12	3,560.74	3,490.92	69.83	50.994	
8,800.00	6,629.99	3,734.00	3,051.82	192.13	98.62	2.63	-833.51	3,045.12	3,546.52	3,480.84	65.69	53.991	
8,834.50	6,629.99	3,734.00	3,051.82	192.48	98.62	2.63	-833.51	3,045.12	3,539.41	3,475.91	63.50	55.735	
8,900.00	6,629.99	3,734.00	3,051.82	193.17	98.62	2.63	-833.51	3,045.12	3,526.80	3,467.38	59.42	59.356	
8,933.77	6,629.99	3,734.00	3,051.82	193.53	98.62	2.63	-833.51	3,045.12	3,520.75	3,463.40	57.35	61.391	
9,000.00	6,629.99	3,734.00	3,051.82	194.25	98.62	2.63	-833.51	3,045.12	3,509.81	3,456.42	53.39	65.735	
9,033.04	6,629.99	3,734.00	3,051.82	194.62	98.62	2.63	-833.51	3,045.12	3,504.81	3,453.33	51.48	68.080	
9,100.00	6,629.99	3,734.00	3,051.82	195.38	98.62	2.63	-833.51	3,045.12	3,495.60	3,447.84	47.76	73.190	
9,132.30	6,629.99	3,734.00	3,051.82	195.75	98.62	2.63	-833.51	3,045.12	3,491.61	3,445.56	46.06	75.810	

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

Lonestar Consulting, LLC

Anticollision Report

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 404 - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 2404-INCLINOMETER

Rule Assigned:

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
9,200.00	6,629.99	3,734.00	3,051.82	196.54	98.62	2.63	-833.51	3,045.12	3,484.21	3,441.49	42.72	81.555	
9,231.56	6,629.99	3,734.00	3,051.82	196.92	98.62	2.63	-833.51	3,045.12	3,481.20	3,439.91	41.30	84.296	
9,300.00	6,629.99	3,734.00	3,051.82	197.74	98.62	2.63	-833.51	3,045.12	3,475.66	3,437.11	38.55	90.159	
9,330.81	6,629.99	3,734.00	3,051.82	198.13	98.62	2.63	-833.51	3,045.12	3,473.60	3,436.10	37.49	92.645	
9,400.00	6,629.99	3,734.00	3,051.82	198.99	98.62	2.63	-833.51	3,045.12	3,469.97	3,434.36	35.61	97.447	
9,430.04	6,629.99	3,734.00	3,051.82	199.37	98.62	2.63	-833.51	3,045.12	3,468.82	3,433.78	35.03	99.016	
9,500.00	6,629.99	3,734.00	3,051.82	200.27	98.62	2.63	-833.51	3,045.12	3,467.15	3,432.80	34.35	100.923	
9,529.19	6,629.99	3,734.00	3,051.82	200.65	98.62	2.63	-833.51	3,045.12	3,466.87	3,432.50	34.37	100.868	
9,600.00	6,629.99	3,734.00	3,051.82	201.59	98.62	2.63	-833.51	3,045.12	3,467.22	3,432.05	35.17	98.598	
9,700.00	6,629.99	3,734.00	3,051.82	202.94	98.62	2.63	-833.51	3,045.12	3,470.17	3,432.22	37.95	91.444	
9,800.00	6,629.99	3,734.00	3,051.82	204.34	98.62	2.63	-833.51	3,045.12	3,476.00	3,433.80	42.19	82.382	
9,900.00	6,629.99	3,734.00	3,051.82	205.76	98.62	2.63	-833.51	3,045.12	3,484.68	3,437.29	47.40	73.518	
10,000.00	6,629.99	3,734.00	3,051.82	207.22	98.62	2.63	-833.51	3,045.12	3,496.21	3,442.99	53.22	65.696	
10,100.00	6,629.99	3,734.00	3,051.82	208.72	98.62	2.63	-833.51	3,045.12	3,510.55	3,451.13	59.42	59.077	
10,200.00	6,629.99	3,734.00	3,051.82	210.25	98.62	2.63	-833.51	3,045.12	3,527.67	3,461.81	65.86	53.561	
10,300.00	6,629.99	3,734.00	3,051.82	211.81	98.62	2.63	-833.51	3,045.12	3,547.52	3,475.09	72.43	48.980	
10,400.00	6,629.99	3,734.00	3,051.82	213.40	98.62	2.63	-833.51	3,045.12	3,570.07	3,491.03	79.04	45.166	
10,500.00	6,629.99	3,734.00	3,051.82	215.02	98.62	2.63	-833.51	3,045.12	3,595.26	3,509.61	85.65	41.976	
10,600.00	6,629.99	3,734.00	3,051.82	216.68	98.62	2.63	-833.51	3,045.12	3,623.03	3,530.82	92.21	39.293	
10,700.00	6,629.99	3,734.00	3,051.82	218.36	98.62	2.63	-833.51	3,045.12	3,653.33	3,554.65	98.68	37.023	
10,800.00	6,629.99	3,734.00	3,051.82	220.07	98.62	2.63	-833.51	3,045.12	3,686.09	3,581.06	105.04	35.093	
10,900.00	6,629.99	3,734.00	3,051.82	221.81	98.62	2.63	-833.51	3,045.12	3,721.26	3,609.99	111.27	33.444	
11,000.00	6,629.99	3,734.00	3,051.82	223.58	98.62	2.63	-833.51	3,045.12	3,758.75	3,641.40	117.35	32.030	
11,100.00	6,629.99	3,734.00	3,051.82	225.37	98.62	2.63	-833.51	3,045.12	3,798.51	3,675.23	123.28	30.812	
11,200.00	6,629.99	3,734.00	3,051.82	227.19	98.62	2.63	-833.51	3,045.12	3,840.47	3,711.43	129.04	29.762	
11,300.00	6,629.99	3,734.00	3,051.82	229.04	98.62	2.63	-833.51	3,045.12	3,884.54	3,749.91	134.63	28.854	
11,400.00	6,629.99	3,734.00	3,051.82	230.91	98.62	2.63	-833.51	3,045.12	3,930.66	3,790.63	140.04	28.069	
11,500.00	6,629.99	3,734.00	3,051.82	232.80	98.62	2.63	-833.51	3,045.12	3,978.77	3,833.50	145.27	27.390	
11,600.00	6,629.99	3,734.00	3,051.82	234.72	98.62	2.63	-833.51	3,045.12	4,028.78	3,878.46	150.32	26.802	
11,700.00	6,629.99	3,734.00	3,051.82	236.67	98.62	2.63	-833.51	3,045.12	4,080.63	3,925.44	155.19	26.295	
11,800.00	6,629.99	3,734.00	3,051.82	238.63	98.62	2.63	-833.51	3,045.12	4,134.25	3,974.37	159.88	25.859	
11,900.00	6,629.99	3,734.00	3,051.82	240.62	98.62	2.63	-833.51	3,045.12	4,189.57	4,025.18	164.39	25.486	
12,000.00	6,629.99	3,734.00	3,051.82	242.63	98.62	2.63	-833.51	3,045.12	4,246.52	4,077.79	168.73	25.168	
12,100.00	6,629.99	3,734.00	3,051.82	244.66	98.62	2.63	-833.51	3,045.12	4,305.05	4,132.15	172.90	24.899	
12,200.00	6,629.99	3,734.00	3,051.82	246.71	98.62	2.63	-833.51	3,045.12	4,365.08	4,188.17	176.90	24.675	
12,300.00	6,629.99	3,734.00	3,051.82	248.78	98.62	2.63	-833.51	3,045.12	4,426.55	4,245.81	180.75	24.490	
12,400.00	6,629.99	3,734.00	3,051.82	250.87	98.62	2.63	-833.51	3,045.12	4,489.42	4,304.98	184.43	24.342	
12,500.00	6,629.99	3,734.00	3,051.82	252.98	98.62	2.63	-833.51	3,045.12	4,553.61	4,365.64	187.97	24.225	
12,600.00	6,629.99	3,734.00	3,051.82	255.11	98.62	2.63	-833.51	3,045.12	4,619.07	4,427.71	191.36	24.139	
12,700.00	6,629.99	3,734.00	3,051.82	257.25	98.62	2.63	-833.51	3,045.12	4,685.75	4,491.15	194.60	24.079	
12,800.00	6,629.99	3,734.00	3,051.82	259.41	98.62	2.63	-833.51	3,045.12	4,753.60	4,555.89	197.71	24.043	
12,900.00	6,629.99	3,734.00	3,051.82	261.60	98.62	2.63	-833.51	3,045.12	4,822.57	4,621.88	200.69	24.029	
13,000.00	6,630.00	3,734.00	3,051.82	263.79	98.62	2.63	-833.51	3,045.12	4,892.62	4,689.07	203.55	24.037	
13,100.00	6,630.00	3,734.00	3,051.82	266.01	98.62	2.63	-833.51	3,045.12	4,963.68	4,757.40	206.28	24.062	
13,200.00	6,630.00	3,734.00	3,051.82	268.24	98.62	2.63	-833.51	3,045.12	5,035.74	4,826.83	208.90	24.106	
13,300.00	6,630.00	3,734.00	3,051.82	270.48	98.62	2.63	-833.51	3,045.12	5,108.73	4,897.32	211.41	24.165	
13,400.00	6,630.00	3,734.00	3,051.82	272.74	98.62	2.63	-833.51	3,045.12	5,182.62	4,968.81	213.81	24.239	
13,500.00	6,630.00	3,734.00	3,051.82	275.02	98.62	2.63	-833.51	3,045.12	5,257.38	5,041.26	216.12	24.327	
13,600.00	6,630.00	3,734.00	3,051.82	277.31	98.62	2.63	-833.51	3,045.12	5,332.97	5,114.64	218.32	24.427	
13,700.00	6,630.00	3,734.00	3,051.82	279.61	98.62	2.63	-833.51	3,045.12	5,409.34	5,188.91	220.44	24.539	
13,800.00	6,630.00	3,734.00	3,051.82	281.93	98.62	2.63	-833.51	3,045.12	5,486.48	5,264.02	222.46	24.663	
13,900.00	6,630.00	3,734.00	3,051.82	284.26	98.62	2.63	-833.51	3,045.12	5,564.35	5,339.94	224.40	24.796	

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

Hilcorp

Lonestar Consulting, LLC

Anticollision Report

LONESTAR CONSULTING

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 404 - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 2404-INCLINOMETER

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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,000.00	6,630.00	3,734.00	3,051.82	286.60	98.62	2.63	-833.51	3,045.12	5,642.91	5,416.64	226.27	24.939	
14,100.00	6,630.00	3,734.00	3,051.82	288.96	98.62	2.63	-833.51	3,045.12	5,722.14	5,494.09	228.05	25.092	
14,200.00	6,630.00	3,734.00	3,051.82	291.33	98.62	2.63	-833.51	3,045.12	5,802.01	5,572.25	229.76	25.252	
14,300.00	6,630.00	3,734.00	3,051.82	293.71	98.62	2.63	-833.51	3,045.12	5,882.50	5,651.10	231.41	25.421	
14,400.00	6,630.00	3,734.00	3,051.82	296.10	98.62	2.63	-833.51	3,045.12	5,963.58	5,730.60	232.98	25.597	
14,500.00	6,630.00	3,734.00	3,051.82	298.51	98.62	2.63	-833.51	3,045.12	6,045.23	5,810.73	234.50	25.780	
14,600.00	6,630.00	3,734.00	3,051.82	300.92	98.62	2.63	-833.51	3,045.12	6,127.42	5,891.47	235.95	25.969	
14,700.00	6,630.00	3,734.00	3,051.82	303.35	98.62	2.63	-833.51	3,045.12	6,210.13	5,972.78	237.35	26.165	
14,800.00	6,630.00	3,734.00	3,051.82	305.79	98.62	2.63	-833.51	3,045.12	6,293.35	6,054.66	238.69	26.366	
14,900.00	6,630.00	3,734.00	3,051.82	308.24	98.62	2.63	-833.51	3,045.12	6,377.04	6,137.06	239.98	26.573	
15,000.00	6,630.00	3,734.00	3,051.82	310.70	98.62	2.63	-833.51	3,045.12	6,461.20	6,219.99	241.22	26.786	
15,100.00	6,630.00	3,734.00	3,051.82	313.16	98.62	2.63	-833.51	3,045.12	6,545.81	6,303.40	242.41	27.003	
15,200.00	6,630.00	3,734.00	3,051.82	315.64	98.62	2.63	-833.51	3,045.12	6,630.84	6,387.29	243.56	27.225	
15,300.00	6,630.00	3,734.00	3,051.82	318.13	98.62	2.63	-833.51	3,045.12	6,716.29	6,471.63	244.66	27.451	
15,400.00	6,630.00	3,734.00	3,051.82	320.63	98.62	2.63	-833.51	3,045.12	6,802.13	6,556.41	245.72	27.682	
15,500.00	6,630.00	3,734.00	3,051.82	323.13	98.62	2.63	-833.51	3,045.12	6,888.36	6,641.61	246.75	27.917	
15,600.00	6,630.00	3,734.00	3,051.82	325.65	98.62	2.63	-833.51	3,045.12	6,974.95	6,727.22	247.73	28.155	
15,700.00	6,630.00	3,734.00	3,051.82	328.17	98.62	2.63	-833.51	3,045.12	7,061.90	6,813.22	248.68	28.397	
15,800.00	6,630.00	3,734.00	3,051.82	330.71	98.62	2.63	-833.51	3,045.12	7,149.19	6,899.59	249.60	28.643	
15,900.00	6,630.00	3,734.00	3,051.82	333.25	98.62	2.63	-833.51	3,045.12	7,236.81	6,986.33	250.48	28.892	
16,000.00	6,630.00	3,734.00	3,051.82	335.80	98.62	2.63	-833.51	3,045.12	7,324.74	7,073.41	251.33	29.144	
16,100.00	6,630.00	3,734.00	3,051.82	338.35	98.62	2.63	-833.51	3,045.12	7,412.99	7,160.83	252.15	29.399	
16,200.00	6,630.00	3,734.00	3,051.82	340.92	98.62	2.63	-833.51	3,045.12	7,501.52	7,248.58	252.95	29.657	
16,227.67	6,630.00	3,734.00	3,051.82	341.63	98.62	2.63	-833.51	3,045.12	7,526.07	7,272.91	253.16	29.728	

Lonestar Consulting, LLC

Anticollision Report

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 404 - ST1 - ST1

Offset Site Error: 0.00 usft

Survey Program: 2404-MWD

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)	Rule Assigned: 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	105.31	-833.51	3,045.12	3,159.23				
100.00	100.00	0.00	0.00	3.04	0.00	105.31	-833.51	3,045.12	3,157.17	3,154.14	3.04	1,039.554	
122.00	122.00	7.42	7.42	3.70	0.01	105.31	-833.51	3,045.12	3,157.14	3,153.42	3.71	850.158	
200.00	200.00	90.06	90.06	6.07	0.11	105.31	-833.49	3,045.05	3,157.07	3,150.89	6.18	511.202	
300.00	300.00	196.00	196.00	9.11	0.23	105.31	-833.42	3,044.80	3,156.82	3,147.48	9.33	338.263	
353.00	352.97	252.12	252.12	10.72	0.30	105.31	-833.36	3,044.58	3,156.60	3,145.60	11.01	286.823	
400.00	399.97	301.92	301.92	12.15	0.36	105.31	-833.29	3,044.34	3,156.37	3,143.88	12.49	252.733	
473.00	472.93	379.22	379.21	14.36	0.45	105.31	-833.16	3,043.89	3,155.93	3,141.14	14.79	213.337	
500.00	499.93	407.82	407.82	15.18	0.49	105.31	-833.10	3,043.70	3,155.74	3,140.10	15.65	201.704	
600.00	599.93	513.76	513.75	18.22	0.61	105.31	-832.87	3,042.87	3,154.92	3,136.12	18.80	167.798	
700.00	699.93	619.70	619.69	21.26	0.74	105.31	-832.57	3,041.84	3,153.91	3,131.96	21.96	143.632	
800.00	799.93	725.63	725.61	24.29	0.86	105.31	-832.22	3,040.62	3,152.72	3,127.60	25.11	125.534	
836.00	835.85	763.69	763.67	25.39	0.91	105.31	-832.08	3,040.14	3,152.24	3,125.99	26.25	120.083	
900.00	899.85	831.49	831.46	27.33	0.99	105.31	-831.82	3,039.21	3,151.33	3,123.06	28.27	111.472	
1,000.00	999.85	937.41	937.37	30.37	1.12	105.31	-831.36	3,037.61	3,149.76	3,118.34	31.43	100.228	
1,100.00	1,099.85	1,043.32	1,043.26	33.40	1.24	105.31	-830.84	3,035.82	3,148.00	3,113.42	34.58	91.032	
1,200.00	1,199.85	1,149.23	1,149.15	36.44	1.37	105.31	-830.28	3,033.83	3,146.05	3,108.31	37.74	83.370	
1,300.00	1,299.85	1,255.13	1,255.03	39.48	1.49	105.31	-829.65	3,031.66	3,143.91	3,103.02	40.89	76.886	
1,327.00	1,326.73	1,283.60	1,283.49	40.30	1.53	105.30	-829.47	3,031.04	3,143.31	3,101.56	41.74	75.302	
1,400.00	1,399.73	1,360.90	1,360.76	42.51	1.62	105.30	-828.97	3,029.29	3,141.59	3,097.54	44.04	71.327	
1,500.00	1,499.73	1,466.78	1,466.61	45.55	1.75	105.30	-828.24	3,026.73	3,139.07	3,091.88	47.20	66.508	
1,600.00	1,599.73	1,572.65	1,572.44	48.59	1.87	105.30	-827.45	3,023.98	3,136.37	3,086.02	50.35	62.289	
1,700.00	1,699.73	1,678.51	1,678.26	51.62	2.00	105.30	-826.61	3,021.04	3,133.48	3,079.98	53.50	58.564	
1,761.00	1,760.60	1,742.95	1,742.67	53.48	2.07	105.30	-826.07	3,019.15	3,131.63	3,076.20	55.43	56.499	
1,800.00	1,799.60	1,784.22	1,783.92	54.66	2.12	105.30	-825.71	3,017.91	3,130.41	3,073.75	56.66	55.252	
1,900.00	1,899.60	1,890.06	1,889.70	57.70	2.25	105.30	-824.76	3,014.59	3,127.14	3,067.33	59.81	52.285	
2,000.00	1,999.60	1,995.88	1,995.46	60.74	2.37	105.30	-823.75	3,011.07	3,123.68	3,060.72	62.96	49.613	
2,100.00	2,099.60	2,101.69	2,101.20	63.77	2.50	105.30	-822.69	3,007.36	3,120.04	3,053.93	66.11	47.194	
2,200.00	2,199.60	2,207.48	2,206.92	66.81	2.63	105.30	-821.57	3,003.47	3,116.21	3,046.95	69.26	44.992	
2,259.00	2,258.51	2,269.80	2,269.18	68.60	2.70	105.30	-820.89	3,001.08	3,113.86	3,042.75	71.12	43.784	
2,300.00	2,299.50	2,313.16	2,312.51	69.85	2.75	105.30	-820.40	2,999.38	3,112.19	3,039.78	72.41	42.980	
2,400.00	2,399.50	2,418.92	2,418.18	72.88	2.88	105.30	-819.18	2,995.11	3,107.99	3,032.43	75.56	41.133	
2,500.00	2,499.50	2,446.00	2,445.24	75.92	2.94	105.31	-819.92	2,994.42	3,105.24	3,026.53	78.71	39.452	
2,560.73	2,560.24	2,446.00	2,445.24	77.76	2.94	105.31	-819.92	2,994.42	3,104.64	3,024.07	80.57	38.535 CC	
2,599.99	2,599.50	2,446.00	2,445.24	78.96	2.94	105.31	-819.92	2,994.42	3,104.89	3,023.14	81.75	37.979	
2,690.00	2,689.42	2,476.00	2,475.14	81.69	3.00	105.35	-822.20	2,994.43	3,106.84	3,022.34	84.50	36.768 ES	
2,699.99	2,699.42	2,476.00	2,475.14	81.99	3.00	105.35	-822.20	2,994.43	3,107.18	3,022.38	84.79	36.644	
2,799.99	2,799.42	2,476.00	2,475.14	85.03	3.00	105.35	-822.20	2,994.43	3,112.30	3,024.61	87.68	35.494	
2,899.99	2,899.42	2,506.00	2,504.78	88.07	3.05	105.43	-826.64	2,995.61	3,120.13	3,029.53	90.61	34.436	
2,999.99	2,999.42	2,506.00	2,504.78	91.10	3.05	105.43	-826.64	2,995.61	3,130.68	3,037.36	93.32	33.549	
3,099.99	3,099.42	2,536.00	2,533.99	94.14	3.12	105.53	-833.08	2,997.88	3,143.91	3,047.81	96.10	32.714	
3,199.99	3,199.42	2,536.00	2,533.99	97.18	3.12	105.53	-833.08	2,997.88	3,159.79	3,061.18	98.61	32.042	
3,271.00	3,270.31	2,567.00	2,563.59	99.33	3.20	105.67	-841.70	3,001.05	3,172.52	3,071.96	100.57	31.546	
3,299.99	3,299.30	2,567.00	2,563.59	100.21	3.20	105.67	-841.70	3,001.05	3,178.06	3,076.80	101.26	31.386	
3,399.99	3,399.30	2,580.29	2,576.05	103.25	3.23	105.74	-846.02	3,002.63	3,198.94	3,095.25	103.68	30.853	
3,499.99	3,499.30	2,597.00	2,591.51	106.29	3.28	105.83	-851.98	3,004.82	3,222.32	3,116.28	106.04	30.388	
3,517.00	3,516.25	2,597.00	2,591.51	106.80	3.28	105.83	-851.98	3,004.82	3,226.53	3,120.13	106.40	30.324	
3,599.99	3,599.25	2,610.94	2,604.20	109.32	3.32	105.92	-857.39	3,006.82	3,248.17	3,139.89	108.28	29.998	
3,699.99	3,699.25	2,625.00	2,616.79	112.36	3.37	106.01	-863.26	3,009.01	3,276.48	3,166.06	110.42	29.674	
3,799.99	3,799.24	2,625.00	2,616.79	115.40	3.37	106.01	-863.26	3,009.01	3,307.39	3,195.12	112.27	29.459	
3,899.99	3,899.24	2,660.00	2,647.06	118.44	3.48	106.27	-879.69	3,015.12	3,340.36	3,225.84	114.51	29.170	
3,942.00	3,941.19	2,660.00	2,647.06	119.71	3.48	106.27	-879.69	3,015.12	3,354.87	3,239.65	115.22	29.118	

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

Lonestar Consulting, LLC

Anticollision Report

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 404 - ST1 - ST1

Offset Site Error: 0.00 usft

Survey Program: 2404-MWD

Rule Assigned:

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
3,999.99	3,999.18	2,660.00	2,647.06	121.47	3.48	106.27	-879.69	3,015.12	3,375.68	3,259.53	116.15	29.063	
4,099.99	4,099.18	2,675.23	2,659.75	124.51	3.54	106.39	-887.58	3,018.12	3,413.35	3,295.42	117.93	28.945	
4,199.99	4,199.18	2,689.00	2,670.98	127.55	3.59	106.50	-894.98	3,021.07	3,453.26	3,333.67	119.58	28.877 SF	
4,299.99	4,299.18	2,689.00	2,670.98	130.58	3.59	106.50	-894.98	3,021.07	3,495.37	3,374.48	120.90	28.912	
4,399.99	4,399.18	2,705.20	2,683.87	133.62	3.66	106.64	-904.02	3,024.86	3,539.49	3,417.07	122.42	28.912	
4,412.00	4,411.15	2,706.29	2,684.72	133.98	3.66	106.65	-904.65	3,025.12	3,544.92	3,422.34	122.58	28.919	
4,499.99	4,499.14	2,720.00	2,695.32	136.66	3.72	106.77	-912.61	3,028.62	3,585.74	3,461.90	123.84	28.955	
4,599.99	4,599.14	2,720.00	2,695.32	139.69	3.72	106.77	-912.61	3,028.62	3,633.91	3,509.05	124.86	29.105	
4,699.99	4,699.14	2,720.00	2,695.32	142.73	3.72	106.77	-912.61	3,028.62	3,684.16	3,558.38	125.78	29.291	
4,799.99	4,799.14	2,743.76	2,713.14	145.77	3.85	106.98	-926.86	3,035.24	3,735.85	3,608.68	127.17	29.376	
4,899.99	4,899.14	2,773.00	2,734.22	148.80	4.05	107.24	-944.97	3,044.32	3,789.85	3,661.21	128.64	29.460	
4,999.99	4,999.14	2,773.00	2,734.22	151.84	4.05	107.24	-944.97	3,044.32	3,844.86	3,715.52	129.34	29.727	
5,099.99	5,099.14	2,773.00	2,734.22	154.88	4.05	107.24	-944.97	3,044.32	3,901.66	3,771.70	129.96	30.022	
5,199.99	5,199.14	2,790.20	2,746.28	157.91	4.20	107.40	-955.83	3,050.02	3,960.03	3,829.06	130.97	30.237	
5,299.99	5,299.14	2,803.00	2,755.17	160.95	4.32	107.52	-963.95	3,054.36	4,019.73	3,887.92	131.81	30.497	
5,399.99	5,399.14	2,847.02	2,785.40	163.99	4.77	107.91	-992.11	3,069.53	4,080.44	3,946.95	133.49	30.566	
5,415.00	5,414.03	2,865.00	2,797.63	164.44	4.97	108.07	-1,003.72	3,075.79	4,089.61	3,955.56	134.06	30.507	
5,499.99	5,499.02	2,865.00	2,797.63	167.02	4.97	108.07	-1,003.72	3,075.79	4,142.14	4,007.75	134.40	30.821	
5,599.99	5,599.02	2,905.00	2,824.02	170.06	5.44	108.45	-1,030.45	3,089.53	4,205.07	4,069.16	135.92	30.939	
5,699.99	5,699.02	2,905.00	2,824.02	173.10	5.44	108.45	-1,030.45	3,089.53	4,269.03	4,132.81	136.23	31.338	
5,799.99	5,799.02	2,905.00	2,824.02	176.14	5.44	108.45	-1,030.45	3,089.53	4,334.35	4,197.87	136.49	31.757	
5,822.00	5,820.97	2,905.00	2,824.02	176.80	5.44	108.45	-1,030.45	3,089.53	4,348.87	4,212.33	136.54	31.851	
5,900.00	5,898.96	2,937.00	2,843.88	179.17	5.86	108.76	-1,052.93	3,100.66	4,400.77	4,263.09	137.68	31.964	
5,950.00	5,948.92	2,937.00	2,843.88	179.93	5.86	-15.34	-1,052.93	3,100.66	4,433.10	4,295.92	137.18	32.317	
6,000.00	5,998.65	2,937.00	2,843.88	179.93	5.86	-14.58	-1,052.93	3,100.66	4,463.19	4,327.12	136.07	32.802	
6,050.00	6,047.91	2,937.00	2,843.88	179.93	5.86	-13.93	-1,052.93	3,100.66	4,490.95	4,356.05	134.91	33.290	
6,100.00	6,096.48	2,937.00	2,843.88	179.93	5.86	-13.39	-1,052.93	3,100.66	4,516.31	4,382.61	133.70	33.779	
6,150.00	6,144.12	2,937.00	2,843.88	179.94	5.86	-12.93	-1,052.93	3,100.66	4,539.17	4,406.72	132.46	34.269	
6,200.00	6,190.61	2,937.00	2,843.88	179.94	5.86	-12.54	-1,052.93	3,100.66	4,559.48	4,428.31	131.17	34.760	
6,250.00	6,235.74	2,937.00	2,843.88	179.94	5.86	-12.23	-1,052.93	3,100.66	4,577.17	4,447.32	129.85	35.249	
6,300.00	6,279.30	2,953.09	2,853.27	179.95	6.10	-11.88	-1,064.59	3,106.57	4,591.83	4,462.82	129.01	35.593	
6,350.00	6,321.08	2,967.00	2,860.94	179.95	6.30	-11.60	-1,074.86	3,111.95	4,604.12	4,476.05	128.07	35.949	
6,400.00	6,360.88	2,967.00	2,860.94	179.96	6.30	-11.45	-1,074.86	3,111.95	4,613.39	4,486.71	126.68	36.419	
6,450.00	6,398.52	2,967.00	2,860.94	179.98	6.30	-11.35	-1,074.86	3,111.95	4,619.87	4,494.61	125.26	36.882	
6,500.00	6,433.83	2,967.00	2,860.94	180.00	6.30	-11.29	-1,074.86	3,111.95	4,623.56	4,499.73	123.83	37.337	
6,510.93	6,441.22	2,967.00	2,860.94	180.00	6.30	-11.29	-1,074.86	3,111.95	4,623.99	4,500.47	123.52	37.435	
6,550.00	6,466.64	2,967.00	2,860.94	180.02	6.30	-11.28	-1,074.86	3,111.95	4,624.44	4,502.04	122.40	37.783	
6,600.00	6,496.79	2,967.00	2,860.94	180.05	6.30	-11.31	-1,074.86	3,111.95	4,622.51	4,501.55	120.95	38.217	
6,616.34	6,506.04	2,967.00	2,860.94	180.07	6.30	-11.33	-1,074.86	3,111.95	4,621.26	4,500.78	120.48	38.357	
6,650.00	6,524.14	2,967.00	2,860.94	180.09	6.30	-11.38	-1,074.86	3,111.95	4,617.76	4,498.25	119.51	38.639	
6,668.04	6,533.30	2,982.84	2,869.23	180.11	6.56	-11.35	-1,086.77	3,118.30	4,615.10	4,495.60	119.50	38.619	
6,700.00	6,548.58	2,999.00	2,877.23	180.14	6.81	-11.36	-1,099.15	3,124.93	4,610.04	4,490.93	119.11	38.705	
6,719.41	6,557.25	2,999.00	2,877.23	180.16	6.81	-11.41	-1,099.15	3,124.93	4,606.24	4,487.69	118.55	38.854	
6,750.00	6,569.97	2,999.00	2,877.23	180.20	6.81	-11.52	-1,099.15	3,124.93	4,599.41	4,481.73	117.68	39.084	
6,770.21	6,577.73	2,999.00	2,877.23	180.23	6.81	-11.61	-1,099.15	3,124.93	4,594.34	4,477.23	117.11	39.231	
6,800.00	6,588.23	2,999.00	2,877.23	180.27	6.81	-11.74	-1,099.15	3,124.93	4,586.05	4,469.78	116.27	39.443	
6,820.79	6,594.87	2,999.00	2,877.23	180.30	6.81	-11.85	-1,099.15	3,124.93	4,579.70	4,464.01	115.69	39.586	
6,850.00	6,603.26	2,999.00	2,877.23	180.35	6.81	-12.02	-1,099.15	3,124.93	4,569.98	4,455.10	114.88	39.781	
6,871.21	6,608.65	2,999.00	2,877.23	180.39	6.81	-12.15	-1,099.15	3,124.93	4,562.36	4,448.07	114.30	39.916	
6,900.00	6,615.00	2,999.00	2,877.23	180.45	6.81	-12.35	-1,099.15	3,124.93	4,551.26	4,437.75	113.51	40.094	
6,921.52	6,619.03	2,999.00	2,877.23	180.49	6.81	-12.52	-1,099.15	3,124.93	4,542.41	4,429.47	112.94	40.221	
6,950.00	6,623.39	2,999.00	2,877.23	180.55	6.81	-12.75	-1,099.15	3,124.93	4,529.95	4,417.76	112.18	40.381	

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

Lonestar Consulting, LLC

Anticollision Report

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 404 - ST1 - ST1

Offset Site Error: 0.00 usft

Survey Program: 2404-MWD

Rule Assigned:

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
6,971.74	6,625.99	2,999.00	2,877.23	180.60	6.81	-12.95	-1,099.15	3,124.93	4,519.88	4,408.27	111.61	40.496	
7,000.00	6,628.40	3,013.24	2,883.85	180.67	7.05	-13.17	-1,110.28	3,130.84	4,505.88	4,394.52	111.36	40.463	
7,021.96	6,629.52	3,028.00	2,890.28	180.72	7.30	-13.34	-1,122.07	3,136.98	4,494.73	4,383.45	111.29	40.389	
7,048.30	6,629.99	3,028.00	2,890.28	180.79	7.30	-13.65	-1,122.07	3,136.98	4,480.47	4,369.84	110.63	40.499	
7,069.63	6,629.99	3,028.00	2,890.28	180.85	7.30	-13.10	-1,122.07	3,136.98	4,468.66	4,358.56	110.10	40.586	
7,100.00	6,629.99	3,028.00	2,890.28	180.94	7.30	-12.31	-1,122.07	3,136.98	4,451.86	4,342.52	109.34	40.716	
7,122.89	6,629.99	3,028.00	2,890.28	181.01	7.30	-11.72	-1,122.07	3,136.98	4,439.22	4,330.46	108.76	40.818	
7,200.00	6,629.99	3,028.00	2,890.28	181.25	7.30	-9.72	-1,122.07	3,136.98	4,396.79	4,290.06	106.73	41.194	
7,234.49	6,629.99	3,028.00	2,890.28	181.38	7.30	-8.83	-1,122.07	3,136.98	4,377.93	4,272.13	105.80	41.379	
7,300.00	6,629.99	3,028.00	2,890.28	181.62	7.30	-7.15	-1,122.07	3,136.98	4,342.33	4,238.35	103.99	41.759	
7,334.15	6,629.99	3,044.28	2,896.90	181.76	7.58	-6.15	-1,135.32	3,143.73	4,323.71	4,220.14	103.57	41.747	
7,400.00	6,629.99	3,060.00	2,902.88	182.03	7.85	-4.33	-1,148.33	3,150.22	4,288.42	4,186.24	102.18	41.970	
7,433.93	6,629.99	3,060.00	2,902.88	182.19	7.85	-3.48	-1,148.33	3,150.22	4,270.33	4,169.16	101.17	42.209	
7,500.00	6,629.99	3,060.00	2,902.88	182.49	7.85	-1.84	-1,148.33	3,150.22	4,235.55	4,136.39	99.17	42.712	
7,533.44	6,629.99	3,060.00	2,902.88	182.66	7.85	-1.03	-1,148.33	3,150.22	4,218.20	4,120.07	98.13	42.986	
7,600.00	6,629.99	3,060.00	2,902.88	183.00	7.85	0.55	-1,148.33	3,150.22	4,184.22	4,088.19	96.03	43.572	
7,632.90	6,629.99	3,060.00	2,902.88	183.18	7.85	1.31	-1,148.33	3,150.22	4,167.72	4,072.74	94.97	43.883	
7,700.00	6,629.99	3,060.00	2,902.88	183.54	7.85	2.83	-1,148.33	3,150.22	4,134.72	4,041.94	92.79	44.562	
7,732.30	6,629.99	3,072.84	2,907.41	183.73	8.08	3.70	-1,159.10	3,155.53	4,118.97	4,026.81	92.16	44.692	
7,800.00	6,629.99	3,088.00	2,912.27	184.12	8.35	5.34	-1,171.98	3,161.90	4,087.23	3,996.79	90.44	45.195	
7,831.73	6,629.99	3,088.00	2,912.27	184.32	8.35	6.00	-1,171.98	3,161.90	4,072.60	3,983.23	89.37	45.571	
7,900.00	6,629.99	3,088.00	2,912.27	184.73	8.35	7.36	-1,171.98	3,161.90	4,042.02	3,954.96	87.06	46.428	
7,926.71	6,629.99	3,088.00	2,912.27	184.90	8.35	7.87	-1,171.98	3,161.90	4,030.41	3,944.26	86.15	46.782	
7,930.98	6,629.99	3,088.00	2,912.27	184.93	8.35	7.87	-1,171.98	3,161.90	4,028.57	3,942.57	86.01	46.839	
7,937.46	6,629.99	3,088.00	2,912.27	184.97	8.35	7.87	-1,171.98	3,161.90	4,025.79	3,940.00	85.79	46.927	
8,000.00	6,629.99	3,088.00	2,912.27	185.37	8.35	7.87	-1,171.98	3,161.90	3,999.37	3,915.73	83.65	47.812	
8,021.85	6,629.99	3,088.00	2,912.27	185.52	8.35	7.87	-1,171.98	3,161.90	3,990.34	3,907.44	82.89	48.137	
8,100.00	6,629.99	3,088.00	2,912.27	186.06	8.35	7.87	-1,171.98	3,161.90	3,958.82	3,878.64	80.18	49.375	
8,129.69	6,629.99	3,088.00	2,912.27	186.27	8.35	7.87	-1,171.98	3,161.90	3,947.19	3,868.05	79.14	49.877	
8,200.00	6,629.99	3,088.00	2,912.27	186.79	8.35	7.87	-1,171.98	3,161.90	3,920.40	3,843.74	76.66	51.139	
8,239.07	6,629.99	3,088.00	2,912.27	187.09	8.35	7.87	-1,171.98	3,161.90	3,905.98	3,830.71	75.28	51.887	
8,300.00	6,629.99	3,088.00	2,912.27	187.57	8.35	7.87	-1,171.98	3,161.90	3,884.18	3,811.07	73.11	53.127	
8,338.43	6,629.99	3,088.00	2,912.27	187.88	8.35	7.87	-1,171.98	3,161.90	3,870.85	3,799.11	71.74	53.954	
8,400.00	6,629.99	3,088.00	2,912.27	188.39	8.35	7.87	-1,171.98	3,161.90	3,850.21	3,780.66	69.55	55.360	
8,437.79	6,629.99	3,088.00	2,912.27	188.72	8.35	7.87	-1,171.98	3,161.90	3,837.97	3,769.77	68.20	56.273	
8,500.00	6,629.99	3,088.00	2,912.27	189.26	8.35	7.87	-1,171.98	3,161.90	3,818.56	3,752.57	65.99	57.863	
8,537.13	6,629.99	3,088.00	2,912.27	189.60	8.35	7.87	-1,171.98	3,161.90	3,807.41	3,742.73	64.68	58.863	
8,600.00	6,629.99	3,088.00	2,912.27	190.17	8.35	7.87	-1,171.98	3,161.90	3,789.28	3,726.81	62.48	60.651	
8,636.47	6,629.99	3,088.00	2,912.27	190.52	8.35	7.87	-1,171.98	3,161.90	3,779.21	3,718.00	61.21	61.741	
8,700.00	6,629.99	3,088.00	2,912.27	191.13	8.35	7.87	-1,171.98	3,161.90	3,762.44	3,703.41	59.03	63.736	
8,735.79	6,629.99	3,088.00	2,912.27	191.48	8.35	7.87	-1,171.98	3,161.90	3,753.43	3,695.61	57.83	64.910	
8,800.00	6,629.99	3,088.00	2,912.27	192.13	8.35	7.87	-1,171.98	3,161.90	3,738.08	3,682.38	55.70	67.108	
8,835.11	6,629.99	3,088.00	2,912.27	192.49	8.35	7.87	-1,171.98	3,161.90	3,730.12	3,675.55	54.57	68.353	
8,900.00	6,629.99	3,088.00	2,912.27	193.17	8.35	7.87	-1,171.98	3,161.90	3,716.25	3,663.71	52.54	70.731	
8,934.41	6,629.99	3,123.61	2,921.54	193.54	9.04	8.37	-1,202.78	3,177.13	3,707.61	3,654.51	53.10	69.823	
9,000.00	6,629.99	3,126.42	2,922.15	194.25	9.10	8.41	-1,205.24	3,178.35	3,694.99	3,643.64	51.35	71.954	
9,034.19	6,629.99	3,127.88	2,922.45	194.63	9.13	8.43	-1,206.53	3,178.98	3,688.85	3,638.36	50.49	73.058	
9,100.00	6,629.99	3,164.00	2,928.37	195.38	9.83	8.94	-1,238.45	3,194.77	3,679.39	3,628.89	50.50	72.856	
9,132.95	6,629.99	3,164.00	2,928.37	195.76	9.83	8.94	-1,238.45	3,194.77	3,674.19	3,624.46	49.73	73.885	
9,200.00	6,629.99	3,164.00	2,928.37	196.54	9.83	8.94	-1,238.45	3,194.77	3,664.51	3,616.22	48.29	75.893	
9,232.56	6,629.99	3,164.00	2,928.37	196.93	9.83	8.94	-1,238.45	3,194.77	3,660.24	3,612.59	47.65	76.807	
9,300.00	6,629.99	3,164.00	2,928.37	197.74	9.83	8.94	-1,238.45	3,194.77	3,652.31	3,605.80	46.51	78.534	

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

Lonestar Consulting, LLC

Anticollision Report

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 404 - ST1 - ST1

Offset Site Error: 0.00 usft

Survey Program: 2404-MWD

Rule Assigned:

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
9,331.85	6,629.99	3,164.00	2,928.37	198.14	9.83	8.94	-1,238.45	3,194.77	3,648.99	3,602.95	46.04	79.250	
9,400.00	6,629.99	3,164.00	2,928.37	198.99	9.83	8.94	-1,238.45	3,194.77	3,642.82	3,597.58	45.24	80.526	
9,431.14	6,629.99	3,164.00	2,928.37	199.39	9.83	8.94	-1,238.45	3,194.77	3,640.41	3,595.46	44.96	80.974	
9,500.00	6,629.99	3,164.00	2,928.37	200.27	9.83	8.94	-1,238.45	3,194.77	3,636.05	3,591.51	44.54	81.633	
9,530.42	6,629.99	3,164.00	2,928.37	200.67	9.83	8.94	-1,238.45	3,194.77	3,634.53	3,590.08	44.45	81.766	
9,600.00	6,629.99	3,164.00	2,928.37	201.59	9.83	8.94	-1,238.45	3,194.77	3,632.02	3,587.57	44.46	81.701	
9,629.68	6,629.99	3,164.00	2,928.37	201.99	9.83	8.94	-1,238.45	3,194.77	3,631.36	3,586.81	44.55	81.513	
9,700.00	6,629.99	3,164.00	2,928.37	202.94	9.83	8.94	-1,238.45	3,194.77	3,630.75	3,585.76	44.99	80.707	
9,728.85	6,629.99	3,488.80	2,986.55	203.35	16.18	13.45	-1,517.72	3,349.48	3,630.01	3,569.87	60.14	60.364	
9,800.00	6,629.99	3,528.66	2,995.21	204.34	16.99	13.99	-1,550.93	3,369.75	3,628.13	3,565.72	62.41	58.134	
9,830.95	6,629.99	3,540.40	2,997.78	204.78	17.24	14.15	-1,560.73	3,375.67	3,627.63	3,564.45	63.19	57.412	
9,887.32	6,629.99	3,562.00	3,002.45	205.58	17.69	14.45	-1,578.79	3,386.58	3,627.29	3,562.60	64.69	56.070	
9,900.00	6,629.99	3,562.00	3,002.45	205.76	17.69	14.45	-1,578.79	3,386.58	3,627.31	3,562.49	64.82	55.963	
9,922.29	6,629.99	3,562.00	3,002.45	206.09	17.69	14.45	-1,578.79	3,386.58	3,627.46	3,562.40	65.05	55.762	
10,000.00	6,629.99	3,594.00	3,009.13	207.22	18.38	14.89	-1,605.50	3,402.87	3,628.88	3,561.39	67.49	53.772	
10,100.00	6,629.99	3,614.65	3,013.27	208.72	18.83	15.16	-1,622.70	3,413.52	3,632.82	3,562.88	69.94	51.940	
10,200.00	6,629.99	3,696.29	3,029.80	210.25	20.57	16.26	-1,690.34	3,456.15	3,638.65	3,563.35	75.30	48.321	
10,300.00	6,629.99	3,734.00	3,037.54	211.81	21.37	16.77	-1,721.54	3,475.87	3,646.36	3,567.43	78.93	46.200	
10,400.00	6,629.99	3,734.00	3,037.54	213.40	21.37	16.77	-1,721.54	3,475.87	3,656.59	3,575.42	81.17	45.049	
10,500.00	6,629.99	3,734.00	3,037.54	215.02	21.37	16.77	-1,721.54	3,475.87	3,669.53	3,585.87	83.65	43.866	
10,600.00	6,629.99	3,734.00	3,037.54	216.68	21.37	16.77	-1,721.54	3,475.87	3,685.13	3,598.79	86.34	42.682	
10,700.00	6,629.99	3,734.00	3,037.54	218.36	21.37	16.77	-1,721.54	3,475.87	3,703.37	3,614.18	89.19	41.522	
10,800.00	6,629.99	3,734.00	3,037.54	220.07	21.37	16.77	-1,721.54	3,475.87	3,724.20	3,632.03	92.17	40.404	
10,900.00	6,629.99	3,734.00	3,037.54	221.81	21.37	16.77	-1,721.54	3,475.87	3,747.59	3,652.33	95.26	39.342	
11,000.00	6,629.99	3,734.00	3,037.54	223.58	21.37	16.77	-1,721.54	3,475.87	3,773.48	3,675.07	98.41	38.344	
11,100.00	6,629.99	3,734.00	3,037.54	225.37	21.37	16.77	-1,721.54	3,475.87	3,801.83	3,700.22	101.61	37.416	
11,200.00	6,629.99	3,734.00	3,037.54	227.19	21.37	16.77	-1,721.54	3,475.87	3,832.58	3,727.74	104.83	36.559	
11,300.00	6,629.99	3,734.00	3,037.54	229.04	21.37	16.77	-1,721.54	3,475.87	3,865.67	3,757.61	108.06	35.774	
11,400.00	6,629.99	3,734.00	3,037.54	230.91	21.37	16.77	-1,721.54	3,475.87	3,901.04	3,789.77	111.27	35.059	
11,500.00	6,629.99	3,734.00	3,037.54	232.80	21.37	16.77	-1,721.54	3,475.87	3,938.64	3,824.19	114.45	34.413	
11,600.00	6,629.99	3,734.00	3,037.54	234.72	21.37	16.77	-1,721.54	3,475.87	3,978.40	3,860.80	117.59	33.832	
11,700.00	6,629.99	3,734.00	3,037.54	236.67	21.37	16.77	-1,721.54	3,475.87	4,020.25	3,899.56	120.68	33.312	
11,800.00	6,629.99	3,734.00	3,037.54	238.63	21.37	16.77	-1,721.54	3,475.87	4,064.13	3,940.42	123.71	32.852	
11,900.00	6,629.99	3,734.00	3,037.54	240.62	21.37	16.77	-1,721.54	3,475.87	4,109.97	3,983.30	126.67	32.446	
12,000.00	6,629.99	3,734.00	3,037.54	242.63	21.37	16.77	-1,721.54	3,475.87	4,157.72	4,028.16	129.56	32.091	
12,100.00	6,629.99	3,734.00	3,037.54	244.66	21.37	16.77	-1,721.54	3,475.87	4,207.30	4,074.93	132.37	31.784	
12,200.00	6,629.99	3,734.00	3,037.54	246.71	21.37	16.77	-1,721.54	3,475.87	4,258.65	4,123.55	135.10	31.522	
12,300.00	6,629.99	3,734.00	3,037.54	248.78	21.37	16.77	-1,721.54	3,475.87	4,311.71	4,173.96	137.75	31.302	
12,400.00	6,629.99	3,734.00	3,037.54	250.87	21.37	16.77	-1,721.54	3,475.87	4,366.42	4,226.11	140.31	31.120	
12,500.00	6,629.99	3,734.00	3,037.54	252.98	21.37	16.77	-1,721.54	3,475.87	4,422.71	4,279.92	142.79	30.974	
12,600.00	6,629.99	3,734.00	3,037.54	255.11	21.37	16.77	-1,721.54	3,475.87	4,480.52	4,335.34	145.18	30.862	
12,700.00	6,629.99	3,734.00	3,037.54	257.25	21.37	16.77	-1,721.54	3,475.87	4,539.81	4,392.32	147.49	30.781	
12,800.00	6,629.99	3,734.00	3,037.54	259.41	21.37	16.77	-1,721.54	3,475.87	4,600.50	4,450.78	149.71	30.728	
12,900.00	6,629.99	3,734.00	3,037.54	261.60	21.37	16.77	-1,721.54	3,475.87	4,662.55	4,510.69	151.86	30.703	
13,000.00	6,630.00	3,734.00	3,037.54	263.79	21.37	16.77	-1,721.54	3,475.87	4,725.90	4,571.97	153.92	30.703	
13,100.00	6,630.00	3,734.00	3,037.54	266.01	21.37	16.77	-1,721.54	3,475.87	4,790.49	4,634.59	155.91	30.727	
13,200.00	6,630.00	3,734.00	3,037.54	268.24	21.37	16.77	-1,721.54	3,475.87	4,856.29	4,698.48	157.81	30.772	
13,300.00	6,630.00	3,734.00	3,037.54	270.48	21.37	16.77	-1,721.54	3,475.87	4,923.24	4,763.60	159.65	30.838	
13,400.00	6,630.00	3,734.00	3,037.54	272.74	21.37	16.77	-1,721.54	3,475.87	4,991.30	4,829.89	161.41	30.924	
13,500.00	6,630.00	3,734.00	3,037.54	275.02	21.37	16.77	-1,721.54	3,475.87	5,060.42	4,897.32	163.10	31.027	
13,600.00	6,630.00	3,734.00	3,037.54	277.31	21.37	16.77	-1,721.54	3,475.87	5,130.55	4,965.83	164.72	31.147	
13,700.00	6,630.00	3,734.00	3,037.54	279.61	21.37	16.77	-1,721.54	3,475.87	5,201.66	5,035.38	166.28	31.282	

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

Lonestar Consulting, LLC

Anticollision Report

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 404 - ST1 - ST1

Offset Site Error: 0.00 usft

Survey Program: 2404-MWD

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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
13,800.00	6,630.00	3,734.00	3,037.54	281.93	21.37	16.77	-1,721.54	3,475.87	5,273.71	5,105.94	167.78	31.433	
13,900.00	6,630.00	3,734.00	3,037.54	284.26	21.37	16.77	-1,721.54	3,475.87	5,346.66	5,177.45	169.21	31.597	
14,000.00	6,630.00	3,734.00	3,037.54	286.60	21.37	16.77	-1,721.54	3,475.87	5,420.48	5,249.89	170.59	31.775	
14,100.00	6,630.00	3,734.00	3,037.54	288.96	21.37	16.77	-1,721.54	3,475.87	5,495.12	5,323.20	171.91	31.965	
14,200.00	6,630.00	3,734.00	3,037.54	291.33	21.37	16.77	-1,721.54	3,475.87	5,570.55	5,397.37	173.18	32.166	
14,300.00	6,630.00	3,734.00	3,037.54	293.71	21.37	16.77	-1,721.54	3,475.87	5,646.75	5,472.35	174.40	32.379	
14,400.00	6,630.00	3,734.00	3,037.54	296.10	21.37	16.77	-1,721.54	3,475.87	5,723.68	5,548.12	175.57	32.601	
14,500.00	6,630.00	3,734.00	3,037.54	298.51	21.37	16.77	-1,721.54	3,475.87	5,801.32	5,624.63	176.69	32.834	
14,600.00	6,630.00	3,734.00	3,037.54	300.92	21.37	16.77	-1,721.54	3,475.87	5,879.63	5,701.86	177.77	33.075	
14,700.00	6,630.00	3,734.00	3,037.54	303.35	21.37	16.77	-1,721.54	3,475.87	5,958.59	5,779.79	178.80	33.326	
14,800.00	6,630.00	3,734.00	3,037.54	305.79	21.37	16.77	-1,721.54	3,475.87	6,038.17	5,858.38	179.79	33.584	
14,900.00	6,630.00	3,734.00	3,037.54	308.24	21.37	16.77	-1,721.54	3,475.87	6,118.36	5,937.61	180.75	33.851	
15,000.00	6,630.00	3,734.00	3,037.54	310.70	21.37	16.77	-1,721.54	3,475.87	6,199.11	6,017.45	181.66	34.125	
15,100.00	6,630.00	3,734.00	3,037.54	313.16	21.37	16.77	-1,721.54	3,475.87	6,280.43	6,097.89	182.54	34.406	
15,200.00	6,630.00	3,734.00	3,037.54	315.64	21.37	16.77	-1,721.54	3,475.87	6,362.27	6,178.89	183.39	34.693	
15,300.00	6,630.00	3,734.00	3,037.54	318.13	21.37	16.77	-1,721.54	3,475.87	6,444.63	6,260.43	184.20	34.987	
15,400.00	6,630.00	3,734.00	3,037.54	320.63	21.37	16.77	-1,721.54	3,475.87	6,527.48	6,342.50	184.98	35.287	
15,500.00	6,630.00	3,734.00	3,037.54	323.13	21.37	16.77	-1,721.54	3,475.87	6,610.81	6,425.07	185.73	35.593	
15,600.00	6,630.00	3,734.00	3,037.54	325.65	21.37	16.77	-1,721.54	3,475.87	6,694.59	6,508.13	186.46	35.904	
15,700.00	6,630.00	3,734.00	3,037.54	328.17	21.37	16.77	-1,721.54	3,475.87	6,778.81	6,591.66	187.15	36.221	
15,800.00	6,630.00	3,734.00	3,037.54	330.71	21.37	16.77	-1,721.54	3,475.87	6,863.45	6,675.63	187.82	36.542	
15,900.00	6,630.00	3,734.00	3,037.54	333.25	21.37	16.77	-1,721.54	3,475.87	6,948.51	6,760.04	188.47	36.869	
16,000.00	6,630.00	3,734.00	3,037.54	335.80	21.37	16.77	-1,721.54	3,475.87	7,033.95	6,844.86	189.09	37.199	
16,100.00	6,630.00	3,734.00	3,037.54	338.35	21.37	16.77	-1,721.54	3,475.87	7,119.78	6,930.09	189.69	37.535	
16,200.00	6,630.00	3,734.00	3,037.54	340.92	21.37	16.77	-1,721.54	3,475.87	7,205.97	7,015.71	190.26	37.874	
16,227.67	6,630.00	3,734.00	3,037.54	341.63	21.37	16.77	-1,721.54	3,475.87	7,229.88	7,039.46	190.42	37.968	

Hilcorp

Lonestar Consulting, LLC

Anticollision Report

LONESTAR CONSULTING

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 404R - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 336-INCLINOMETER

Rule Assigned:

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	104.29	-764.35	3,001.20	3,099.10				
100.00	100.00	0.00	0.00	3.04	0.00	104.29	-764.35	3,001.20	3,097.04	3,094.00	3.04	1,019.752	
120.17	120.17	6.17	6.17	3.65	0.19	104.29	-764.35	3,001.20	3,097.00	3,093.17	3.84	807.185	
122.00	122.00	8.00	8.00	3.70	0.24	104.29	-764.35	3,001.20	3,097.00	3,093.06	3.95	784.425	
200.00	200.00	86.00	86.00	6.07	2.61	104.29	-764.35	3,001.20	3,097.00	3,088.32	8.69	356.577	
300.00	300.00	186.00	186.00	9.11	5.65	104.29	-764.35	3,001.20	3,097.00	3,082.24	14.76	209.841	
353.00	352.97	238.97	238.97	10.72	7.26	104.29	-764.35	3,001.20	3,097.00	3,079.03	17.98	172.278	
400.00	399.97	285.97	285.97	12.15	8.68	104.29	-764.35	3,001.20	3,097.00	3,076.17	20.83	148.671	
473.00	472.93	358.93	358.93	14.36	10.90	104.29	-764.35	3,001.20	3,097.00	3,071.74	25.26	122.587	
500.00	499.93	385.93	385.93	15.18	11.72	104.29	-764.35	3,001.20	3,097.00	3,070.10	26.90	115.115	
600.00	599.93	485.93	485.93	18.22	14.76	104.29	-764.35	3,001.20	3,097.00	3,064.03	32.98	93.914	
696.55	696.48	582.48	582.48	21.15	17.69	104.28	-763.81	3,001.20	3,096.87	3,058.03	38.84	79.731	
700.00	699.93	585.88	585.88	21.26	17.79	104.28	-763.81	3,001.20	3,096.87	3,057.82	39.05	79.307	
800.00	799.93	684.55	684.55	24.29	20.79	104.28	-763.90	3,001.20	3,096.89	3,051.81	45.08	68.694	
836.00	835.85	720.00	720.00	25.39	21.87	104.28	-763.98	3,001.20	3,096.91	3,049.66	47.25	65.540	
900.00	899.85	783.15	783.14	27.33	23.78	104.29	-764.17	3,001.20	3,096.96	3,045.85	51.11	60.590	
1,000.00	999.85	885.92	885.85	30.37	26.90	104.29	-764.35	3,001.20	3,097.00	3,039.73	57.27	54.076	
1,084.07	1,083.93	969.99	969.92	32.92	29.46	104.27	-763.58	3,001.20	3,096.81	3,034.44	62.38	49.647	
1,100.00	1,099.85	985.03	984.96	33.40	29.91	104.27	-763.59	3,001.20	3,096.82	3,033.50	63.32	48.909	
1,200.00	1,199.85	1,079.48	1,079.40	36.44	32.78	104.28	-764.04	3,001.20	3,096.93	3,027.71	69.22	44.739	
1,300.00	1,299.85	1,185.95	1,185.85	39.48	36.02	104.29	-764.35	3,001.20	3,097.00	3,021.51	75.49	41.024	
1,327.00	1,326.73	1,212.83	1,212.73	40.30	36.83	104.29	-764.35	3,001.20	3,097.00	3,019.87	77.13	40.154	
1,382.36	1,382.09	1,268.19	1,268.08	41.98	38.51	104.28	-764.00	3,001.20	3,096.92	3,016.43	80.49	38.475	
1,400.00	1,399.73	1,285.46	1,285.36	42.51	39.04	104.28	-764.01	3,001.20	3,096.92	3,015.37	81.55	37.975	
1,500.00	1,499.73	1,383.38	1,383.28	45.55	42.01	104.29	-764.19	3,001.20	3,096.97	3,009.40	87.56	35.369	
1,600.00	1,599.73	1,485.84	1,485.73	48.59	45.12	104.29	-764.35	3,001.20	3,097.00	3,003.29	93.71	33.049	
1,700.00	1,699.73	1,585.84	1,585.73	51.62	48.16	104.29	-764.35	3,001.20	3,097.00	2,997.22	99.78	31.037	
1,761.00	1,760.60	1,646.71	1,646.60	53.48	50.01	104.29	-764.35	3,001.20	3,097.00	2,993.52	103.48	29.927	
1,789.96	1,789.56	1,675.66	1,675.56	54.36	50.89	104.28	-764.08	3,001.20	3,096.94	2,991.69	105.24	29.426	
1,800.00	1,799.60	1,685.63	1,685.52	54.66	51.19	104.28	-764.08	3,001.20	3,096.94	2,991.09	105.85	29.258	
1,900.00	1,899.60	1,784.97	1,784.86	57.70	54.21	104.28	-764.13	3,001.20	3,096.95	2,985.05	111.90	27.675	
2,000.00	1,999.60	1,884.31	1,884.20	60.74	57.22	104.29	-764.27	3,001.20	3,096.98	2,979.03	117.96	26.255	
2,100.00	2,099.60	1,985.74	1,985.60	63.77	60.30	104.29	-764.35	3,001.20	3,097.00	2,972.93	124.08	24.961	
2,200.00	2,199.60	2,085.74	2,085.60	66.81	63.34	104.29	-764.35	3,001.20	3,097.00	2,966.85	130.15	23.796	
2,259.00	2,258.51	2,144.65	2,144.51	68.60	65.13	104.29	-764.35	3,001.20	3,097.00	2,963.27	133.73	23.159	
2,300.00	2,299.50	2,185.64	2,185.50	69.85	66.37	104.29	-764.35	3,001.20	3,097.00	2,960.78	136.22	22.735	
2,400.00	2,399.50	2,285.64	2,285.50	72.88	69.41	104.29	-764.35	3,001.20	3,097.00	2,954.71	142.29	21.765	
2,489.29	2,488.79	2,374.93	2,374.77	75.59	72.12	104.25	-762.38	3,001.20	3,096.52	2,948.80	147.72	20.963 CC	
2,500.00	2,499.50	2,385.49	2,385.33	75.92	72.44	104.25	-762.38	3,001.20	3,096.52	2,948.16	148.36	20.871	
2,599.99	2,599.50	2,484.05	2,483.89	78.96	75.44	104.26	-762.50	3,001.20	3,096.55	2,942.15	154.39	20.056	
2,690.00	2,689.42	2,572.68	2,572.51	81.69	78.13	104.26	-762.76	3,001.20	3,096.61	2,936.80	159.82	19.376	
2,699.99	2,699.42	2,582.53	2,582.36	81.99	78.43	104.26	-762.80	3,001.20	3,096.62	2,936.20	160.42	19.303	
2,799.99	2,799.42	2,681.10	2,680.92	85.03	81.42	104.27	-763.29	3,001.20	3,096.74	2,930.30	166.45	18.605	
2,899.99	2,899.42	2,779.67	2,779.49	88.07	84.41	104.28	-763.96	3,001.20	3,096.91	2,924.43	172.48	17.955	
2,999.99	2,999.42	2,885.70	2,885.42	91.10	87.63	104.29	-764.35	3,001.20	3,097.00	2,918.27	178.74	17.327	
3,099.99	3,099.42	2,985.70	2,985.42	94.14	90.67	104.29	-764.35	3,001.20	3,097.00	2,912.19	184.81	16.758	
3,109.48	3,108.90	2,995.18	2,994.90	94.43	90.96	104.29	-764.35	3,001.20	3,097.00	2,911.62	185.39	16.706	
3,199.99	3,199.42	3,033.00	3,032.69	97.18	92.11	104.29	-764.35	3,001.20	3,097.45	2,908.20	189.26	16.366	
3,271.00	3,270.31	3,033.00	3,032.69	99.33	92.11	104.29	-764.35	3,001.20	3,099.47	2,908.18	191.29	16.203 ES	
3,299.99	3,299.30	3,033.00	3,032.69	100.21	92.11	104.29	-764.35	3,001.20	3,100.76	2,908.67	192.09	16.142	
3,399.99	3,399.30	3,033.00	3,032.69	103.25	92.11	104.29	-764.35	3,001.20	3,107.29	2,912.58	194.71	15.958	
3,499.99	3,499.30	3,033.00	3,032.69	106.29	92.11	104.29	-764.35	3,001.20	3,117.01	2,919.89	197.12	15.812	

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

Hilcorp

Lonestar Consulting, LLC

Anticollision Report

LONESTAR CONSULTING

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 404R - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 336-INCLINOMETER

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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
3,517.00	3,516.25	3,033.00	3,032.69	106.80	92.11	104.29	-764.35	3,001.20	3,118.98	2,921.46	197.51	15.791	
3,599.99	3,599.25	3,033.00	3,032.69	109.32	92.11	104.29	-764.35	3,001.20	3,129.89	2,930.57	199.32	15.703	
3,699.99	3,699.25	3,033.00	3,032.69	112.36	92.11	104.29	-764.35	3,001.20	3,145.91	2,944.61	201.30	15.628	
3,799.99	3,799.24	3,033.00	3,032.69	115.40	92.11	104.29	-764.35	3,001.20	3,165.01	2,961.95	203.06	15.587	
3,899.99	3,899.24	3,033.00	3,032.69	118.44	92.11	104.29	-764.35	3,001.20	3,187.13	2,982.52	204.60	15.577 SF	
3,942.00	3,941.19	3,033.00	3,032.69	119.71	92.11	104.29	-764.35	3,001.20	3,197.29	2,992.10	205.19	15.582	
3,999.99	3,999.18	3,033.00	3,032.69	121.47	92.11	104.29	-764.35	3,001.20	3,212.19	3,006.25	205.94	15.598	
4,099.99	4,099.18	3,033.00	3,032.69	124.51	92.11	104.29	-764.35	3,001.20	3,240.16	3,033.10	207.07	15.648	
4,199.99	4,199.18	3,033.00	3,032.69	127.55	92.11	104.29	-764.35	3,001.20	3,270.96	3,062.96	208.00	15.726	
4,299.99	4,299.18	3,033.00	3,032.69	130.58	92.11	104.29	-764.35	3,001.20	3,304.49	3,095.75	208.74	15.831	
4,399.99	4,399.18	3,033.00	3,032.69	133.62	92.11	104.29	-764.35	3,001.20	3,340.68	3,131.38	209.30	15.961	
4,412.00	4,411.15	3,033.00	3,032.69	133.98	92.11	104.29	-764.35	3,001.20	3,345.19	3,135.83	209.35	15.979	
4,499.99	4,499.14	3,033.00	3,032.69	136.66	92.11	104.29	-764.35	3,001.20	3,379.43	3,169.74	209.69	16.116	
4,599.99	4,599.14	3,033.00	3,032.69	139.69	92.11	104.29	-764.35	3,001.20	3,420.68	3,210.76	209.92	16.295	
4,699.99	4,699.14	3,033.00	3,032.69	142.73	92.11	104.29	-764.35	3,001.20	3,464.32	3,254.33	210.00	16.497	
4,799.99	4,799.14	3,033.00	3,032.69	145.77	92.11	104.29	-764.35	3,001.20	3,510.27	3,300.34	209.93	16.721	
4,899.99	4,899.14	3,033.00	3,032.69	148.80	92.11	104.29	-764.35	3,001.20	3,558.44	3,348.69	209.75	16.966	
4,999.99	4,999.14	3,033.00	3,032.69	151.84	92.11	104.29	-764.35	3,001.20	3,608.74	3,399.30	209.44	17.231	
5,099.99	5,099.14	3,033.00	3,032.69	154.88	92.11	104.29	-764.35	3,001.20	3,661.08	3,452.05	209.02	17.515	
5,199.99	5,199.14	3,033.00	3,032.69	157.91	92.11	104.29	-764.35	3,001.20	3,715.37	3,506.86	208.51	17.819	
5,299.99	5,299.14	3,033.00	3,032.69	160.95	92.11	104.29	-764.35	3,001.20	3,771.53	3,563.62	207.91	18.140	
5,399.99	5,399.14	3,033.00	3,032.69	163.99	92.11	104.29	-764.35	3,001.20	3,829.48	3,622.25	207.23	18.479	
5,415.00	5,414.03	3,033.00	3,032.69	164.44	92.11	104.29	-764.35	3,001.20	3,838.26	3,631.13	207.13	18.531	
5,499.99	5,499.02	3,033.00	3,032.69	167.02	92.11	104.29	-764.35	3,001.20	3,889.07	3,682.58	206.49	18.834	
5,599.99	5,599.02	3,033.00	3,032.69	170.06	92.11	104.29	-764.35	3,001.20	3,950.36	3,744.68	205.68	19.206	
5,699.99	5,699.02	3,033.00	3,032.69	173.10	92.11	104.29	-764.35	3,001.20	4,013.20	3,808.38	204.82	19.594	
5,799.99	5,799.02	3,033.00	3,032.69	176.14	92.11	104.29	-764.35	3,001.20	4,077.53	3,873.62	203.91	19.997	
5,822.00	5,820.97	3,033.00	3,032.69	176.80	92.11	104.29	-764.35	3,001.20	4,091.84	3,888.14	203.71	20.087	
5,900.00	5,898.96	3,033.00	3,032.69	179.17	92.11	104.29	-764.35	3,001.20	4,143.24	3,940.28	202.96	20.414	
5,950.00	5,948.92	3,033.00	3,032.69	179.93	92.11	-19.58	-764.35	3,001.20	4,175.41	3,973.55	201.86	20.685	
6,000.00	5,998.65	3,033.00	3,032.69	179.93	92.11	-18.61	-764.35	3,001.20	4,205.42	4,005.31	200.12	21.015	
6,050.00	6,047.91	3,033.00	3,032.69	179.93	92.11	-17.80	-764.35	3,001.20	4,233.19	4,034.89	198.30	21.347	
6,100.00	6,096.48	3,033.00	3,032.69	179.93	92.11	-17.10	-764.35	3,001.20	4,258.62	4,062.21	196.42	21.681	
6,150.00	6,144.12	3,033.00	3,032.69	179.94	92.11	-16.51	-764.35	3,001.20	4,281.65	4,087.18	194.47	22.016	
6,200.00	6,190.61	3,033.00	3,032.69	179.94	92.11	-16.02	-764.35	3,001.20	4,302.20	4,109.73	192.47	22.352	
6,250.00	6,235.74	3,033.00	3,032.69	179.94	92.11	-15.61	-764.35	3,001.20	4,320.21	4,129.79	190.42	22.688	
6,300.00	6,279.30	3,033.00	3,032.69	179.95	92.11	-15.27	-764.35	3,001.20	4,335.63	4,147.31	188.32	23.023	
6,350.00	6,321.08	3,033.00	3,032.69	179.95	92.11	-15.00	-764.35	3,001.20	4,348.42	4,162.24	186.18	23.356	
6,400.00	6,360.88	3,033.00	3,032.69	179.96	92.11	-14.79	-764.35	3,001.20	4,358.54	4,174.52	184.01	23.686	
6,450.00	6,398.52	3,033.00	3,032.69	179.98	92.11	-14.64	-764.35	3,001.20	4,365.95	4,184.14	181.81	24.013	
6,500.00	6,433.83	3,033.00	3,032.69	180.00	92.11	-14.55	-764.35	3,001.20	4,370.65	4,191.06	179.59	24.336	
6,550.00	6,466.64	3,033.00	3,032.69	180.02	92.11	-14.51	-764.35	3,001.20	4,372.62	4,195.26	177.36	24.653	
6,600.00	6,496.79	3,033.00	3,032.69	180.05	92.11	-14.52	-764.35	3,001.20	4,371.85	4,196.72	175.13	24.964	
6,615.29	6,505.46	3,033.00	3,032.69	180.06	92.11	-14.54	-764.35	3,001.20	4,371.07	4,196.62	174.44	25.057	
6,650.00	6,524.14	3,033.00	3,032.69	180.09	92.11	-14.59	-764.35	3,001.20	4,368.34	4,195.45	172.89	25.266	
6,667.16	6,532.86	3,033.00	3,032.69	180.11	92.11	-14.63	-764.35	3,001.20	4,366.51	4,194.38	172.13	25.367	
6,700.00	6,548.58	3,033.00	3,032.69	180.14	92.11	-14.72	-764.35	3,001.20	4,362.11	4,191.44	170.67	25.559	
6,718.43	6,556.82	3,033.00	3,032.69	180.16	92.11	-14.78	-764.35	3,001.20	4,359.12	4,189.27	169.86	25.664	
6,750.00	6,569.97	3,033.00	3,032.69	180.20	92.11	-14.90	-764.35	3,001.20	4,353.16	4,184.70	168.47	25.840	
6,769.34	6,577.41	3,033.00	3,032.69	180.23	92.11	-14.99	-764.35	3,001.20	4,348.98	4,181.36	167.62	25.946	
6,800.00	6,588.23	3,033.00	3,032.69	180.27	92.11	-15.14	-764.35	3,001.20	4,341.54	4,175.25	166.29	26.109	
6,820.00	6,594.63	3,033.00	3,032.69	180.30	92.11	-15.26	-764.35	3,001.20	4,336.14	4,170.72	165.42	26.212	

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

Hilcorp

Lonestar Consulting, LLC

Anticollision Report

LONESTAR CONSULTING

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 404R - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 336-INCLINOMETER

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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,850.00	6,603.26	3,033.00	3,032.69	180.35	92.11	-15.45	-764.35	3,001.20	4,327.26	4,163.12	164.14	26.363	
6,870.48	6,608.47	3,033.00	3,032.69	180.39	92.11	-15.60	-764.35	3,001.20	4,320.66	4,157.38	163.28	26.462	
6,900.00	6,615.00	3,033.00	3,032.69	180.45	92.11	-15.83	-764.35	3,001.20	4,310.37	4,148.33	162.04	26.600	
6,920.85	6,618.91	3,033.00	3,032.69	180.49	92.11	-16.01	-764.35	3,001.20	4,302.57	4,141.39	161.18	26.694	
6,950.00	6,623.39	3,033.00	3,032.69	180.55	92.11	-16.29	-764.35	3,001.20	4,290.93	4,130.93	159.99	26.819	
6,971.11	6,625.92	3,033.00	3,032.69	180.60	92.11	-16.51	-764.35	3,001.20	4,281.96	4,122.81	159.15	26.905	
7,000.00	6,628.40	3,033.00	3,032.69	180.67	92.11	-16.83	-764.35	3,001.20	4,268.97	4,110.97	158.01	27.017	
7,021.31	6,629.49	3,033.00	3,032.69	180.72	92.11	-17.10	-764.35	3,001.20	4,258.87	4,101.69	157.18	27.095	
7,048.30	6,629.99	3,033.00	3,032.69	180.79	92.11	-17.46	-764.35	3,001.20	4,245.45	4,089.29	156.16	27.187	
7,069.03	6,629.99	3,033.00	3,032.69	180.85	92.11	-16.99	-764.35	3,001.20	4,234.88	4,079.50	155.37	27.256	
7,100.00	6,629.99	3,033.00	3,032.69	180.94	92.11	-16.28	-764.35	3,001.20	4,219.07	4,064.89	154.18	27.364	
7,122.27	6,629.99	3,033.00	3,032.69	181.00	92.11	-15.77	-764.35	3,001.20	4,207.72	4,054.40	153.31	27.445	
7,200.00	6,629.99	3,033.00	3,032.69	181.25	92.11	-14.00	-764.35	3,001.20	4,168.14	4,017.95	150.19	27.753	
7,233.36	6,629.99	3,033.00	3,032.69	181.37	92.11	-13.23	-764.35	3,001.20	4,151.21	4,002.41	148.80	27.898	
7,300.00	6,629.99	3,033.00	3,032.69	181.62	92.11	-11.71	-764.35	3,001.20	4,117.53	3,971.58	145.95	28.211	
7,333.11	6,629.99	3,033.00	3,032.69	181.75	92.11	-10.95	-764.35	3,001.20	4,100.89	3,956.39	144.50	28.380	
7,400.00	6,629.99	3,033.00	3,032.69	182.03	92.11	-9.44	-764.35	3,001.20	4,067.51	3,926.03	141.48	28.749	
7,432.79	6,629.99	3,033.00	3,032.69	182.18	92.11	-8.70	-764.35	3,001.20	4,051.28	3,911.32	139.96	28.945	
7,500.00	6,629.99	3,033.00	3,032.69	182.49	92.11	-7.20	-764.35	3,001.20	4,018.35	3,881.58	136.77	29.380	
7,532.41	6,629.99	3,033.00	3,032.69	182.66	92.11	-6.49	-764.35	3,001.20	4,002.65	3,867.45	135.19	29.607	
7,600.00	6,629.99	3,033.00	3,032.69	183.00	92.11	-5.03	-764.35	3,001.20	3,970.33	3,838.50	131.82	30.119	
7,631.97	6,629.99	3,033.00	3,032.69	183.17	92.11	-4.34	-764.35	3,001.20	3,955.26	3,825.07	130.19	30.380	
7,700.00	6,629.99	3,033.00	3,032.69	183.54	92.11	-2.92	-764.35	3,001.20	3,923.72	3,797.07	126.65	30.982	
7,731.47	6,629.99	3,033.00	3,032.69	183.73	92.11	-2.28	-764.35	3,001.20	3,909.39	3,784.42	124.97	31.282	
7,800.00	6,629.99	3,033.00	3,032.69	184.12	92.11	-0.91	-764.35	3,001.20	3,878.80	3,757.55	121.25	31.989	
7,830.91	6,629.99	3,033.00	3,032.69	184.31	92.11	-0.31	-764.35	3,001.20	3,865.31	3,745.76	119.55	32.333	
7,900.00	6,629.99	3,033.00	3,032.69	184.73	92.11	0.99	-764.35	3,001.20	3,835.87	3,720.20	115.67	33.161	
7,926.71	6,629.99	3,033.00	3,032.69	184.90	92.11	1.48	-764.35	3,001.20	3,824.78	3,710.62	114.15	33.505	
7,930.29	6,629.99	3,033.00	3,032.69	184.92	92.11	1.48	-764.35	3,001.20	3,823.30	3,709.35	113.95	33.553	
7,937.29	6,629.99	3,033.00	3,032.69	184.97	92.11	1.48	-764.35	3,001.20	3,820.43	3,706.88	113.55	33.646	
8,000.00	6,629.99	3,033.00	3,032.69	185.37	92.11	1.48	-764.35	3,001.20	3,795.14	3,685.21	109.93	34.523	
8,021.36	6,629.99	3,033.00	3,032.69	185.52	92.11	1.48	-764.35	3,001.20	3,786.73	3,678.05	108.68	34.842	
8,100.00	6,629.99	3,033.00	3,032.69	186.06	92.11	1.48	-764.35	3,001.20	3,756.64	3,652.60	104.04	36.109	
8,128.99	6,629.99	3,033.00	3,032.69	186.27	92.11	1.48	-764.35	3,001.20	3,745.90	3,643.60	102.30	36.616	
8,200.00	6,629.99	3,033.00	3,032.69	186.79	92.11	1.48	-764.35	3,001.20	3,720.42	3,622.42	98.01	37.961	
8,238.33	6,629.99	3,033.00	3,032.69	187.08	92.11	1.48	-764.35	3,001.20	3,707.16	3,611.50	95.66	38.752	
8,300.00	6,629.99	3,033.00	3,032.69	187.57	92.11	1.48	-764.35	3,001.20	3,686.57	3,594.71	91.86	40.134	
8,337.66	6,629.99	3,033.00	3,032.69	187.87	92.11	1.48	-764.35	3,001.20	3,674.44	3,584.93	89.51	41.049	
8,400.00	6,629.99	3,033.00	3,032.69	188.39	92.11	1.48	-764.35	3,001.20	3,655.13	3,569.53	85.60	42.698	
8,436.98	6,629.99	3,033.00	3,032.69	188.71	92.11	1.48	-764.35	3,001.20	3,644.14	3,560.86	83.27	43.761	
8,500.00	6,629.99	3,033.00	3,032.69	189.26	92.11	1.48	-764.35	3,001.20	3,626.19	3,546.91	79.28	45.739	
8,536.28	6,629.99	3,033.00	3,032.69	189.59	92.11	1.48	-764.35	3,001.20	3,616.31	3,539.34	76.97	46.981	
8,600.00	6,629.99	3,033.00	3,032.69	190.17	92.11	1.48	-764.35	3,001.20	3,599.78	3,526.87	72.92	49.369	
8,635.58	6,629.99	3,033.00	3,032.69	190.51	92.11	1.48	-764.35	3,001.20	3,591.02	3,520.36	70.65	50.827	
8,700.00	6,629.99	3,033.00	3,032.69	191.13	92.11	1.48	-764.35	3,001.20	3,575.99	3,509.42	66.56	53.725	
8,734.87	6,629.99	3,033.00	3,032.69	191.47	92.11	1.48	-764.35	3,001.20	3,568.31	3,503.95	64.36	55.445	
8,800.00	6,629.99	3,033.00	3,032.69	192.13	92.11	1.48	-764.35	3,001.20	3,554.84	3,494.57	60.28	58.976	
8,834.15	6,629.99	3,033.00	3,032.69	192.48	92.11	1.48	-764.35	3,001.20	3,548.24	3,490.08	58.16	61.008	
8,900.00	6,629.99	3,033.00	3,032.69	193.17	92.11	1.48	-764.35	3,001.20	3,536.40	3,482.25	54.14	65.314	
8,933.42	6,629.99	3,033.00	3,032.69	193.53	92.11	1.48	-764.35	3,001.20	3,530.85	3,478.70	52.15	67.706	
9,000.00	6,629.99	3,033.00	3,032.69	194.25	92.11	1.48	-764.35	3,001.20	3,520.70	3,472.42	48.28	72.918	
9,032.69	6,629.99	3,033.00	3,032.69	194.62	92.11	1.48	-764.35	3,001.20	3,516.17	3,469.72	46.45	75.696	

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

Lonestar Consulting, LLC

Anticollision Report

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 404R - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 336-INCLINOMETER

Rule Assigned:

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
9,100.00	6,629.99	3,033.00	3,032.69	195.38	92.11	1.48	-764.35	3,001.20	3,507.79	3,464.94	42.85	81.864	
9,131.95	6,629.99	3,033.00	3,032.69	195.75	92.11	1.48	-764.35	3,001.20	3,504.25	3,463.02	41.24	84.979	
9,200.00	6,629.99	3,033.00	3,032.69	196.54	92.11	1.48	-764.35	3,001.20	3,497.68	3,459.62	38.06	91.900	
9,231.21	6,629.99	3,033.00	3,032.69	196.92	92.11	1.48	-764.35	3,001.20	3,495.11	3,458.37	36.74	95.127	
9,300.00	6,629.99	3,033.00	3,032.69	197.74	92.11	1.48	-764.35	3,001.20	3,490.42	3,456.21	34.21	102.019	
9,330.47	6,629.99	3,033.00	3,032.69	198.12	92.11	1.48	-764.35	3,001.20	3,488.77	3,455.48	33.29	104.800	
9,400.00	6,629.99	3,033.00	3,032.69	198.99	92.11	1.48	-764.35	3,001.20	3,486.01	3,454.27	31.74	109.845	
9,429.68	6,629.99	3,033.00	3,032.69	199.37	92.11	1.48	-764.35	3,001.20	3,485.25	3,453.90	31.35	111.173	
9,478.07	6,629.99	3,033.00	3,032.69	199.99	92.11	1.48	-764.35	3,001.20	3,484.55	3,453.42	31.14	111.917	
9,500.00	6,629.99	3,033.00	3,032.69	200.27	92.11	1.48	-764.35	3,001.20	3,484.46	3,453.24	31.22	111.612	
9,600.00	6,629.99	3,033.00	3,032.69	201.59	92.11	1.48	-764.35	3,001.20	3,485.78	3,452.76	33.02	105.550	
9,700.00	6,629.99	3,033.00	3,032.69	202.94	92.11	1.48	-764.35	3,001.20	3,489.97	3,453.29	36.69	95.126	
9,800.00	6,629.99	3,033.00	3,032.69	204.34	92.11	1.48	-764.35	3,001.20	3,497.02	3,455.50	41.52	84.229	
9,900.00	6,629.99	3,033.00	3,032.69	205.76	92.11	1.48	-764.35	3,001.20	3,506.90	3,459.84	47.07	74.510	
10,000.00	6,629.99	3,033.00	3,032.69	207.22	92.11	1.48	-764.35	3,001.20	3,519.60	3,466.54	53.06	66.329	
10,100.00	6,629.99	3,033.00	3,032.69	208.72	92.11	1.48	-764.35	3,001.20	3,535.08	3,475.75	59.33	59.581	
10,200.00	6,629.99	3,033.00	3,032.69	210.25	92.11	1.48	-764.35	3,001.20	3,553.31	3,487.56	65.76	54.036	
10,300.00	6,629.99	3,033.00	3,032.69	211.81	92.11	1.48	-764.35	3,001.20	3,574.25	3,502.00	72.25	49.468	
10,400.00	6,629.99	3,033.00	3,032.69	213.40	92.11	1.48	-764.35	3,001.20	3,597.85	3,519.09	78.76	45.681	
10,500.00	6,629.99	3,033.00	3,032.69	215.02	92.11	1.48	-764.35	3,001.20	3,624.05	3,538.82	85.23	42.521	
10,600.00	6,629.99	3,033.00	3,032.69	216.68	92.11	1.48	-764.35	3,001.20	3,652.80	3,561.17	91.63	39.866	
10,700.00	6,629.99	3,033.00	3,032.69	218.36	92.11	1.48	-764.35	3,001.20	3,684.04	3,586.12	97.92	37.622	
10,800.00	6,629.99	3,033.00	3,032.69	220.07	92.11	1.48	-764.35	3,001.20	3,717.71	3,613.61	104.10	35.713	
10,900.00	6,629.99	3,033.00	3,032.69	221.81	92.11	1.48	-764.35	3,001.20	3,753.75	3,643.61	110.14	34.081	
11,000.00	6,629.99	3,033.00	3,032.69	223.58	92.11	1.48	-764.35	3,001.20	3,792.08	3,676.04	116.03	32.681	
11,100.00	6,629.99	3,033.00	3,032.69	225.37	92.11	1.48	-764.35	3,001.20	3,832.63	3,710.87	121.76	31.476	
11,200.00	6,629.99	3,033.00	3,032.69	227.19	92.11	1.48	-764.35	3,001.20	3,875.34	3,748.02	127.33	30.436	
11,300.00	6,629.99	3,033.00	3,032.69	229.04	92.11	1.48	-764.35	3,001.20	3,920.14	3,787.42	132.72	29.536	
11,400.00	6,629.99	3,033.00	3,032.69	230.91	92.11	1.48	-764.35	3,001.20	3,966.96	3,829.01	137.94	28.758	
11,500.00	6,629.99	3,033.00	3,032.69	232.80	92.11	1.48	-764.35	3,001.20	4,015.71	3,872.73	142.98	28.085	
11,600.00	6,629.99	3,033.00	3,032.69	234.72	92.11	1.48	-764.35	3,001.20	4,066.35	3,918.50	147.85	27.503	
11,700.00	6,629.99	3,033.00	3,032.69	236.67	92.11	1.48	-764.35	3,001.20	4,118.79	3,966.25	152.54	27.001	
11,800.00	6,629.99	3,033.00	3,032.69	238.63	92.11	1.48	-764.35	3,001.20	4,172.97	4,015.90	157.06	26.569	
11,900.00	6,629.99	3,033.00	3,032.69	240.62	92.11	1.48	-764.35	3,001.20	4,228.81	4,067.41	161.41	26.200	
12,000.00	6,629.99	3,033.00	3,032.69	242.63	92.11	1.48	-764.35	3,001.20	4,286.27	4,120.68	165.59	25.886	
12,100.00	6,629.99	3,033.00	3,032.69	244.66	92.11	1.48	-764.35	3,001.20	4,345.26	4,175.66	169.60	25.621	
12,200.00	6,629.99	3,033.00	3,032.69	246.71	92.11	1.48	-764.35	3,001.20	4,405.74	4,232.28	173.46	25.400	
12,300.00	6,629.99	3,033.00	3,032.69	248.78	92.11	1.48	-764.35	3,001.20	4,467.63	4,290.48	177.15	25.219	
12,400.00	6,629.99	3,033.00	3,032.69	250.87	92.11	1.48	-764.35	3,001.20	4,530.89	4,350.19	180.70	25.074	
12,500.00	6,629.99	3,033.00	3,032.69	252.98	92.11	1.48	-764.35	3,001.20	4,595.46	4,411.35	184.11	24.961	
12,600.00	6,629.99	3,033.00	3,032.69	255.11	92.11	1.48	-764.35	3,001.20	4,661.27	4,473.90	187.37	24.878	
12,700.00	6,629.99	3,033.00	3,032.69	257.25	92.11	1.48	-764.35	3,001.20	4,728.28	4,537.79	190.50	24.821	
12,800.00	6,629.99	3,033.00	3,032.69	259.41	92.11	1.48	-764.35	3,001.20	4,796.44	4,602.95	193.49	24.789	
12,900.00	6,629.99	3,033.00	3,032.69	261.60	92.11	1.48	-764.35	3,001.20	4,865.71	4,669.35	196.36	24.779	
13,000.00	6,630.00	3,033.00	3,032.69	263.79	92.11	1.48	-764.35	3,001.20	4,936.02	4,736.91	199.11	24.790	
13,100.00	6,630.00	3,033.00	3,032.69	266.01	92.11	1.48	-764.35	3,001.20	5,007.35	4,805.60	201.75	24.820	
13,200.00	6,630.00	3,033.00	3,032.69	268.24	92.11	1.48	-764.35	3,001.20	5,079.64	4,875.37	204.27	24.867	
13,300.00	6,630.00	3,033.00	3,032.69	270.48	92.11	1.48	-764.35	3,001.20	5,152.86	4,946.17	206.69	24.930	
13,400.00	6,630.00	3,033.00	3,032.69	272.74	92.11	1.48	-764.35	3,001.20	5,226.97	5,017.96	209.01	25.009	
13,500.00	6,630.00	3,033.00	3,032.69	275.02	92.11	1.48	-764.35	3,001.20	5,301.93	5,090.70	211.23	25.101	
13,600.00	6,630.00	3,033.00	3,032.69	277.31	92.11	1.48	-764.35	3,001.20	5,377.70	5,164.35	213.36	25.205	
13,700.00	6,630.00	3,033.00	3,032.69	279.61	92.11	1.48	-764.35	3,001.20	5,454.26	5,238.86	215.39	25.322	

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

Lonestar Consulting, LLC

Anticollision Report

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 404R - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 336-INCLINOMETER

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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
13,800.00	6,630.00	3,033.00	3,032.69	281.93	92.11	1.48	-764.35	3,001.20	5,531.56	5,314.21	217.35	25.450	
13,900.00	6,630.00	3,033.00	3,032.69	284.26	92.11	1.48	-764.35	3,001.20	5,609.58	5,390.35	219.22	25.588	
14,000.00	6,630.00	3,033.00	3,032.69	286.60	92.11	1.48	-764.35	3,001.20	5,688.28	5,467.26	221.02	25.736	
14,100.00	6,630.00	3,033.00	3,032.69	288.96	92.11	1.48	-764.35	3,001.20	5,767.65	5,544.90	222.75	25.893	
14,200.00	6,630.00	3,033.00	3,032.69	291.33	92.11	1.48	-764.35	3,001.20	5,847.65	5,623.25	224.40	26.059	
14,300.00	6,630.00	3,033.00	3,032.69	293.71	92.11	1.48	-764.35	3,001.20	5,928.26	5,702.27	225.99	26.232	
14,400.00	6,630.00	3,033.00	3,032.69	296.10	92.11	1.48	-764.35	3,001.20	6,009.45	5,781.93	227.51	26.414	
14,500.00	6,630.00	3,033.00	3,032.69	298.51	92.11	1.48	-764.35	3,001.20	6,091.20	5,862.22	228.98	26.602	
14,600.00	6,630.00	3,033.00	3,032.69	300.92	92.11	1.48	-764.35	3,001.20	6,173.49	5,943.10	230.38	26.797	
14,700.00	6,630.00	3,033.00	3,032.69	303.35	92.11	1.48	-764.35	3,001.20	6,256.29	6,024.55	231.73	26.998	
14,800.00	6,630.00	3,033.00	3,032.69	305.79	92.11	1.48	-764.35	3,001.20	6,339.59	6,106.55	233.03	27.205	
14,900.00	6,630.00	3,033.00	3,032.69	308.24	92.11	1.48	-764.35	3,001.20	6,423.36	6,189.08	234.28	27.417	
15,000.00	6,630.00	3,033.00	3,032.69	310.70	92.11	1.48	-764.35	3,001.20	6,507.60	6,272.12	235.48	27.635	
15,100.00	6,630.00	3,033.00	3,032.69	313.16	92.11	1.48	-764.35	3,001.20	6,592.27	6,355.64	236.64	27.858	
15,200.00	6,630.00	3,033.00	3,032.69	315.64	92.11	1.48	-764.35	3,001.20	6,677.37	6,439.62	237.75	28.086	
15,300.00	6,630.00	3,033.00	3,032.69	318.13	92.11	1.48	-764.35	3,001.20	6,762.88	6,524.06	238.82	28.318	
15,400.00	6,630.00	3,033.00	3,032.69	320.63	92.11	1.48	-764.35	3,001.20	6,848.78	6,608.93	239.85	28.555	
15,500.00	6,630.00	3,033.00	3,032.69	323.13	92.11	1.48	-764.35	3,001.20	6,935.05	6,694.21	240.84	28.795	
15,600.00	6,630.00	3,033.00	3,032.69	325.65	92.11	1.48	-764.35	3,001.20	7,021.69	6,779.90	241.80	29.040	
15,700.00	6,630.00	3,033.00	3,032.69	328.17	92.11	1.48	-764.35	3,001.20	7,108.68	6,865.97	242.72	29.288	
15,800.00	6,630.00	3,033.00	3,032.69	330.71	92.11	1.48	-764.35	3,001.20	7,196.01	6,952.41	243.60	29.540	
15,900.00	6,630.00	3,033.00	3,032.69	333.25	92.11	1.48	-764.35	3,001.20	7,283.67	7,039.21	244.46	29.795	
16,000.00	6,630.00	3,033.00	3,032.69	335.80	92.11	1.48	-764.35	3,001.20	7,371.64	7,126.35	245.29	30.053	
16,100.00	6,630.00	3,033.00	3,032.69	338.35	92.11	1.48	-764.35	3,001.20	7,459.91	7,213.83	246.09	30.314	
16,200.00	6,630.00	3,033.00	3,032.69	340.92	92.11	1.48	-764.35	3,001.20	7,548.48	7,301.62	246.86	30.578	
16,227.67	6,630.00	3,033.00	3,032.69	341.63	92.11	1.48	-764.35	3,001.20	7,573.03	7,325.97	247.06	30.652	

Lonestar Consulting, LLC

Anticollision Report

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 412 - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 120-INCLINOMETER

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)	Rule Assigned: Distance Between Centres (usft)	Rule Assigned: Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	376.00	376.00	0.00	11.42	96.10	-937.88	8,768.86	8,818.87	8,807.45	11.42	772.318	
100.00	100.00	474.75	474.74	3.04	14.42	96.10	-937.50	8,768.86	8,818.83	8,801.38	17.45	505.252	
122.00	122.00	496.30	496.29	3.70	15.07	96.10	-937.53	8,768.86	8,818.83	8,800.06	18.78	469.666	
200.00	200.00	572.69	572.69	6.07	17.39	96.10	-937.73	8,768.86	8,818.86	8,795.39	23.47	375.823	
300.00	300.00	676.01	676.00	9.11	20.53	96.10	-937.88	8,768.86	8,818.87	8,789.23	29.64	297.536	
353.00	352.97	728.98	728.97	10.72	22.14	96.10	-937.88	8,768.86	8,818.87	8,786.01	32.86	268.396	
400.00	399.97	775.98	775.97	12.15	23.57	96.10	-937.88	8,768.86	8,818.87	8,783.16	35.71	246.943	
473.00	472.93	848.94	848.93	14.36	25.78	96.10	-937.88	8,768.86	8,818.87	8,778.73	40.14	219.677	
484.93	484.86	860.83	860.81	14.73	26.14	96.10	-937.61	8,768.86	8,818.84	8,777.97	40.87	215.788	
500.00	499.93	875.77	875.76	15.18	26.60	96.10	-937.62	8,768.86	8,818.84	8,777.06	41.78	211.081	
600.00	599.93	974.94	974.93	18.22	29.61	96.10	-937.68	8,768.86	8,818.85	8,771.02	47.83	184.387	
700.00	699.93	1,074.11	1,074.10	21.26	32.62	96.10	-937.83	8,768.86	8,818.87	8,764.99	53.88	163.687	
800.00	799.93	1,175.95	1,175.93	24.29	35.71	96.10	-937.88	8,768.86	8,818.87	8,758.87	60.01	146.967	
836.00	835.85	1,211.88	1,211.85	25.39	36.80	96.10	-937.88	8,768.86	8,818.87	8,756.68	62.19	141.805	
860.80	860.65	1,236.42	1,236.40	26.14	37.55	96.10	-937.60	8,768.86	8,818.84	8,755.15	63.69	138.468	
900.00	899.85	1,274.40	1,274.38	27.33	38.70	96.10	-937.64	8,768.86	8,818.85	8,752.81	66.03	133.553	
1,000.00	999.85	1,375.89	1,375.85	30.37	41.78	96.10	-937.88	8,768.86	8,818.87	8,746.72	72.15	122.228	
1,100.00	1,099.85	1,475.89	1,475.85	33.40	44.82	96.10	-937.88	8,768.86	8,818.87	8,740.65	78.22	112.738	
1,200.00	1,199.85	1,575.89	1,575.85	36.44	47.86	96.10	-937.88	8,768.86	8,818.87	8,734.57	84.30	104.615	
1,252.40	1,252.25	1,628.28	1,628.24	38.03	49.45	96.10	-936.99	8,768.86	8,818.78	8,731.30	87.48	100.809	
1,300.00	1,299.85	1,674.83	1,674.79	39.48	50.86	96.10	-937.02	8,768.86	8,818.78	8,728.44	90.34	97.618	
1,327.00	1,326.73	1,701.12	1,701.08	40.30	51.66	96.10	-937.06	8,768.86	8,818.78	8,726.83	91.96	95.900	
1,400.00	1,399.73	1,772.51	1,772.46	42.51	53.83	96.10	-937.24	8,768.86	8,818.80	8,722.46	96.34	91.536	
1,500.00	1,499.73	1,870.31	1,870.26	45.55	56.80	96.10	-937.70	8,768.86	8,818.85	8,716.50	102.35	86.164	
1,600.00	1,599.73	1,975.85	1,975.73	48.59	60.00	96.10	-937.88	8,768.86	8,818.87	8,710.28	108.59	81.212	
1,700.00	1,699.73	2,075.85	2,075.73	51.62	63.04	96.10	-937.88	8,768.86	8,818.87	8,704.21	114.66	76.910	
1,726.12	1,725.85	2,101.92	2,101.79	52.42	63.83	96.10	-936.79	8,768.86	8,818.75	8,702.51	116.25	75.861	
1,761.00	1,760.60	2,135.00	2,134.86	53.48	64.84	96.10	-936.82	8,768.86	8,818.76	8,700.45	118.31	74.538	
1,800.00	1,799.60	2,172.11	2,171.97	54.66	65.96	96.10	-936.92	8,768.86	8,818.77	8,698.15	120.62	73.109	
1,900.00	1,899.60	2,267.29	2,267.14	57.70	68.85	96.10	-937.54	8,768.86	8,818.84	8,692.29	126.55	69.686	
2,000.00	1,999.60	2,375.80	2,375.60	60.74	72.15	96.10	-937.88	8,768.86	8,818.87	8,685.99	132.88	66.365	
2,057.54	2,057.15	2,433.33	2,433.12	62.48	73.90	96.10	-937.31	8,768.86	8,818.81	8,682.43	136.38	64.664	
2,100.00	2,099.60	2,473.28	2,473.07	63.77	75.11	96.10	-937.36	8,768.86	8,818.82	8,679.94	138.88	63.499	
2,200.00	2,199.60	2,575.84	2,575.60	66.81	78.22	96.10	-937.88	8,768.86	8,818.87	8,673.84	145.03	60.806	
2,259.00	2,258.51	2,634.75	2,634.51	68.60	80.01	96.10	-937.88	8,768.86	8,818.87	8,670.26	148.61	59.341	
2,300.00	2,299.50	2,675.74	2,675.50	69.85	81.26	96.10	-937.88	8,768.86	8,818.87	8,667.77	151.10	58.363	
2,400.00	2,399.50	2,775.74	2,775.50	72.88	84.29	96.10	-937.88	8,768.86	8,818.87	8,661.69	157.18	56.108	
2,438.63	2,438.14	2,813.35	2,813.10	74.06	85.44	96.10	-936.93	8,768.86	8,818.77	8,659.28	159.49	55.293	
2,500.00	2,499.50	2,872.53	2,872.28	75.92	87.23	96.10	-937.06	8,768.86	8,818.79	8,655.63	163.15	54.052	
2,599.99	2,599.50	2,968.98	2,968.73	78.96	90.16	96.10	-937.58	8,768.86	8,818.84	8,649.72	169.12	52.146	
2,690.00	2,689.42	3,065.73	3,065.42	81.69	93.10	96.10	-937.88	8,768.86	8,818.87	8,644.08	174.79	50.454	
2,699.99	2,699.42	3,075.73	3,075.42	81.99	93.40	96.10	-937.88	8,768.86	8,818.87	8,643.47	175.40	50.279	
2,793.25	2,792.67	3,168.83	3,168.52	84.83	96.23	96.10	-937.19	8,768.86	8,818.80	8,637.74	181.06	48.707	
2,799.99	2,799.42	3,175.25	3,174.93	85.03	96.43	96.10	-937.19	8,768.86	8,818.80	8,637.34	181.46	48.600	
2,899.99	2,899.42	3,270.36	3,270.04	88.07	99.31	96.10	-937.49	8,768.86	8,818.83	8,631.45	187.38	47.063	
2,999.99	2,999.42	3,375.77	3,375.42	91.10	102.52	96.10	-937.88	8,768.86	8,818.87	8,625.25	193.62	45.547	
3,099.99	3,099.42	3,475.77	3,475.42	94.14	105.55	96.10	-937.88	8,768.86	8,818.87	8,619.18	199.69	44.162	
3,108.49	3,107.91	3,484.27	3,483.91	94.40	105.81	96.10	-937.88	8,768.86	8,818.87	8,618.66	200.21	44.048	
3,199.99	3,199.42	3,530.00	3,529.61	97.18	107.20	96.10	-937.88	8,768.86	8,818.99	8,614.62	204.37	43.151	
3,271.00	3,270.31	3,530.00	3,529.61	99.33	107.20	96.10	-937.88	8,768.86	8,819.64	8,613.13	206.52	42.707	
3,299.99	3,299.30	3,530.00	3,529.61	100.21	107.20	96.10	-937.88	8,768.86	8,820.07	8,612.69	207.39	42.530	
3,399.99	3,399.30	3,530.00	3,529.61	103.25	107.20	96.10	-937.88	8,768.86	8,822.29	8,611.92	210.37	41.937	

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

Hilcorp

Lonestar Consulting, LLC

Anticollision Report

LONESTAR CONSULTING

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 412 - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 120-INCLINOMETER

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)	Rule Assigned: Distance Between Centres (usft)	Rule Assigned: Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
3,499.99	3,499.30	3,530.00	3,529.61	106.29	107.20	96.10	-937.88	8,768.86	8,825.64	8,612.32	213.32	41.372	
3,517.00	3,516.25	3,530.00	3,529.61	106.80	107.20	96.10	-937.88	8,768.86	8,826.32	8,612.50	213.82	41.278	
3,599.99	3,599.25	3,530.00	3,529.61	109.32	107.20	96.10	-937.88	8,768.86	8,830.12	8,613.87	216.25	40.833	
3,699.99	3,699.25	3,530.00	3,529.61	112.36	107.20	96.10	-937.88	8,768.86	8,835.73	8,616.59	219.14	40.319	
3,799.99	3,799.24	3,530.00	3,529.61	115.40	107.20	96.10	-937.88	8,768.86	8,842.47	8,620.47	222.01	39.830	
3,899.99	3,899.24	3,530.00	3,529.61	118.44	107.20	96.10	-937.88	8,768.86	8,850.34	8,625.50	224.83	39.364	
3,942.00	3,941.19	3,530.00	3,529.61	119.71	107.20	96.10	-937.88	8,768.86	8,853.97	8,627.96	226.01	39.175	
3,999.99	3,999.18	3,530.00	3,529.61	121.47	107.20	96.10	-937.88	8,768.86	8,859.32	8,631.69	227.63	38.920	
4,099.99	4,099.18	3,530.00	3,529.61	124.51	107.20	96.10	-937.88	8,768.86	8,869.42	8,639.03	230.39	38.497	
4,199.99	4,199.18	3,530.00	3,529.61	127.55	107.20	96.10	-937.88	8,768.86	8,880.64	8,647.52	233.12	38.095	
4,299.99	4,299.18	3,530.00	3,529.61	130.58	107.20	96.10	-937.88	8,768.86	8,892.96	8,657.16	235.81	37.713	
4,399.99	4,399.18	3,530.00	3,529.61	133.62	107.20	96.10	-937.88	8,768.86	8,906.40	8,667.94	238.46	37.350	
4,412.00	4,411.15	3,530.00	3,529.61	133.98	107.20	96.10	-937.88	8,768.86	8,908.08	8,669.31	238.77	37.308	
4,499.99	4,499.14	3,530.00	3,529.61	136.66	107.20	96.10	-937.88	8,768.86	8,920.93	8,679.85	241.07	37.005	
4,599.99	4,599.14	3,530.00	3,529.61	139.69	107.20	96.10	-937.88	8,768.86	8,936.56	8,692.91	243.65	36.678	
4,699.99	4,699.14	3,530.00	3,529.61	142.73	107.20	96.10	-937.88	8,768.86	8,953.28	8,707.09	246.19	36.368	
4,799.99	4,799.14	3,530.00	3,529.61	145.77	107.20	96.10	-937.88	8,768.86	8,971.08	8,722.39	248.68	36.074	
4,899.99	4,899.14	3,530.00	3,529.61	148.80	107.20	96.10	-937.88	8,768.86	8,989.96	8,738.82	251.14	35.796	
4,999.99	4,999.14	3,530.00	3,529.61	151.84	107.20	96.10	-937.88	8,768.86	9,009.91	8,756.35	253.56	35.534	
5,099.99	5,099.14	3,530.00	3,529.61	154.88	107.20	96.10	-937.88	8,768.86	9,030.92	8,774.99	255.94	35.286	
5,199.99	5,199.14	3,530.00	3,529.61	157.91	107.20	96.10	-937.88	8,768.86	9,052.99	8,794.72	258.27	35.052	
5,299.99	5,299.14	3,530.00	3,529.61	160.95	107.20	96.10	-937.88	8,768.86	9,076.11	8,815.54	260.57	34.832	
5,399.99	5,399.14	3,530.00	3,529.61	163.99	107.20	96.10	-937.88	8,768.86	9,100.27	8,837.45	262.82	34.625	
5,415.00	5,414.03	3,530.00	3,529.61	164.44	107.20	96.10	-937.88	8,768.86	9,103.95	8,840.80	263.16	34.595	
5,499.99	5,499.02	3,530.00	3,529.61	167.02	107.20	96.10	-937.88	8,768.86	9,125.43	8,860.39	265.03	34.431	
5,599.99	5,599.02	3,530.00	3,529.61	170.06	107.20	96.10	-937.88	8,768.86	9,151.64	8,884.44	267.20	34.250	
5,699.99	5,699.02	3,530.00	3,529.61	173.10	107.20	96.10	-937.88	8,768.86	9,178.87	8,909.54	269.33	34.080	
5,799.99	5,799.02	3,530.00	3,529.61	176.14	107.20	96.10	-937.88	8,768.86	9,207.10	8,935.68	271.42	33.922	
5,822.00	5,820.97	3,530.00	3,529.61	176.80	107.20	96.10	-937.88	8,768.86	9,213.43	8,941.56	271.87	33.889	
5,900.00	5,898.96	3,530.00	3,529.61	179.17	107.20	96.10	-937.88	8,768.86	9,236.31	8,962.85	273.46	33.776	
5,950.00	5,948.92	3,530.00	3,529.61	179.93	107.20	-28.37	-937.88	8,768.86	9,249.86	8,976.12	273.73	33.791	
6,000.00	5,998.65	3,530.00	3,529.61	179.93	107.20	-27.95	-937.88	8,768.86	9,260.74	8,987.47	273.27	33.888	
6,050.00	6,047.91	3,530.00	3,529.61	179.93	107.20	-27.65	-937.88	8,768.86	9,268.92	8,996.12	272.80	33.976	
6,100.00	6,096.48	3,530.00	3,529.61	179.93	107.20	-27.45	-937.88	8,768.86	9,274.36	9,002.04	272.33	34.056	
6,150.00	6,144.12	3,530.00	3,529.61	179.94	107.20	-27.35	-937.88	8,768.86	9,277.05	9,005.21	271.84	34.127	
6,200.00	6,190.61	3,530.00	3,529.61	179.94	107.20	-27.36	-937.88	8,768.86	9,276.97	9,005.63	271.35	34.189	
6,250.00	6,235.74	3,530.00	3,529.61	179.94	107.20	-27.46	-937.88	8,768.86	9,274.13	9,003.28	270.85	34.241	
6,300.00	6,279.30	3,530.00	3,529.61	179.95	107.20	-27.66	-937.88	8,768.86	9,268.53	8,998.18	270.36	34.283	
6,350.00	6,321.08	3,530.00	3,529.61	179.95	107.20	-27.97	-937.88	8,768.86	9,260.20	8,990.34	269.86	34.315	
6,400.00	6,360.88	3,530.00	3,529.61	179.96	107.20	-28.39	-937.88	8,768.86	9,249.16	8,979.79	269.37	34.336	
6,450.00	6,398.52	3,530.00	3,529.61	179.98	107.20	-28.93	-937.88	8,768.86	9,235.47	8,966.58	268.89	34.347	
6,500.00	6,433.83	3,530.00	3,529.61	180.00	107.20	-29.59	-937.88	8,768.86	9,219.16	8,950.75	268.41	34.347	
6,550.00	6,466.64	3,530.00	3,529.61	180.02	107.20	-30.39	-937.88	8,768.86	9,200.31	8,932.36	267.95	34.336	
6,600.00	6,496.79	3,530.00	3,529.61	180.05	107.20	-31.34	-937.88	8,768.86	9,178.99	8,911.49	267.50	34.314	
6,650.00	6,524.14	3,530.00	3,529.61	180.09	107.20	-32.45	-937.88	8,768.86	9,155.28	8,888.21	267.07	34.280	
6,700.00	6,548.58	3,530.00	3,529.61	180.14	107.20	-33.75	-937.88	8,768.86	9,129.27	8,862.61	266.67	34.235	
6,750.00	6,569.97	3,530.00	3,529.61	180.20	107.20	-35.27	-937.88	8,768.86	9,101.07	8,834.79	266.28	34.179	
6,800.00	6,588.23	3,530.00	3,529.61	180.27	107.20	-37.03	-937.88	8,768.86	9,070.78	8,804.86	265.92	34.111	
6,850.00	6,603.26	3,530.00	3,529.61	180.35	107.20	-39.07	-937.88	8,768.86	9,038.54	8,772.95	265.59	34.032	
6,900.00	6,615.00	3,530.00	3,529.61	180.45	107.20	-41.43	-937.88	8,768.86	9,004.46	8,739.17	265.29	33.942	
6,950.00	6,623.39	3,530.00	3,529.61	180.55	107.20	-44.16	-937.88	8,768.86	8,968.69	8,703.66	265.03	33.840	
7,000.00	6,628.40	3,530.00	3,529.61	180.67	107.20	-47.30	-937.88	8,768.86	8,931.38	8,666.58	264.80	33.729	

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

Hilcorp

Lonestar Consulting, LLC

Anticollision Report

LONESTAR CONSULTING

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 412 - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 120-INCLINOMETER

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)	Rule Assigned: Distance Between Centres (usft)	Rule Assigned: Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,048.30	6,629.99	3,530.00	3,529.61	180.79	107.20	-50.79	-937.88	8,768.86	8,894.02	8,629.40	264.62	33.611	
7,100.00	6,629.99	3,530.00	3,529.61	180.94	107.20	-49.06	-937.88	8,768.86	8,853.01	8,588.57	264.44	33.479	
7,200.00	6,629.99	3,530.00	3,529.61	181.25	107.20	-45.25	-937.88	8,768.86	8,771.62	8,507.55	264.07	33.217	
7,300.00	6,629.99	3,530.00	3,529.61	181.62	107.20	-40.75	-937.88	8,768.86	8,687.81	8,424.13	263.68	32.948	
7,400.00	6,629.99	3,530.00	3,529.61	182.03	107.20	-35.48	-937.88	8,768.86	8,601.92	8,338.66	263.26	32.674	
7,500.00	6,629.99	3,530.00	3,529.61	182.49	107.20	-29.34	-937.88	8,768.86	8,514.30	8,251.50	262.81	32.397	
7,600.00	6,629.99	3,530.00	3,529.61	183.00	107.20	-22.33	-937.88	8,768.86	8,425.34	8,163.03	262.32	32.119	
7,700.00	6,629.99	3,530.00	3,529.61	183.54	107.20	-14.54	-937.88	8,768.86	8,335.44	8,073.65	261.79	31.840	
7,800.00	6,629.99	3,530.00	3,529.61	184.12	107.20	-6.21	-937.88	8,768.86	8,245.00	7,983.78	261.22	31.564	
7,900.00	6,629.99	3,530.00	3,529.61	184.73	107.20	2.30	-937.88	8,768.86	8,154.46	7,893.86	260.61	31.290	
7,926.71	6,629.99	3,530.00	3,529.61	184.90	107.20	4.56	-937.88	8,768.86	8,130.32	7,869.89	260.44	31.218	
8,000.00	6,629.99	3,530.00	3,529.61	185.37	107.20	4.56	-937.88	8,768.86	8,064.18	7,804.21	259.96	31.021	
8,100.00	6,629.99	3,530.00	3,529.61	186.06	107.20	4.56	-937.88	8,768.86	7,974.13	7,714.83	259.30	30.753	
8,200.00	6,629.99	3,530.00	3,529.61	186.79	107.20	4.56	-937.88	8,768.86	7,884.32	7,625.71	258.61	30.488	
8,300.00	6,629.99	3,530.00	3,529.61	187.57	107.20	4.56	-937.88	8,768.86	7,794.76	7,536.86	257.90	30.224	
8,400.00	6,629.99	3,530.00	3,529.61	188.39	107.20	4.56	-937.88	8,768.86	7,705.46	7,448.29	257.16	29.963	
8,500.00	6,629.99	3,530.00	3,529.61	189.26	107.20	4.56	-937.88	8,768.86	7,616.42	7,360.02	256.40	29.705	
8,600.00	6,629.99	3,530.00	3,529.61	190.17	107.20	4.56	-937.88	8,768.86	7,527.66	7,272.04	255.62	29.449	
8,700.00	6,629.99	3,530.00	3,529.61	191.13	107.20	4.56	-937.88	8,768.86	7,439.18	7,184.37	254.81	29.195	
8,800.00	6,629.99	3,530.00	3,529.61	192.13	107.20	4.56	-937.88	8,768.86	7,351.00	7,097.03	253.97	28.944	
8,900.00	6,629.99	3,530.00	3,529.61	193.17	107.20	4.56	-937.88	8,768.86	7,263.12	7,010.02	253.10	28.697	
9,000.00	6,629.99	3,530.00	3,529.61	194.25	107.20	4.56	-937.88	8,768.86	7,175.57	6,923.36	252.20	28.452	
9,100.00	6,629.99	3,530.00	3,529.61	195.38	107.20	4.56	-937.88	8,768.86	7,088.34	6,837.07	251.27	28.210	
9,200.00	6,629.99	3,530.00	3,529.61	196.54	107.20	4.56	-937.88	8,768.86	7,001.45	6,751.14	250.31	27.971	
9,300.00	6,629.99	3,530.00	3,529.61	197.74	107.20	4.56	-937.88	8,768.86	6,914.92	6,665.61	249.31	27.736	
9,400.00	6,629.99	3,530.00	3,529.61	198.99	107.20	4.56	-937.88	8,768.86	6,828.75	6,580.48	248.28	27.505	
9,500.00	6,629.99	3,530.00	3,529.61	200.27	107.20	4.56	-937.88	8,768.86	6,742.97	6,495.77	247.20	27.277	
9,600.00	6,629.99	3,530.00	3,529.61	201.59	107.20	4.56	-937.88	8,768.86	6,657.58	6,411.49	246.09	27.053	
9,700.00	6,629.99	3,530.00	3,529.61	202.94	107.20	4.56	-937.88	8,768.86	6,572.61	6,327.67	244.94	26.834	
9,800.00	6,629.99	3,530.00	3,529.61	204.34	107.20	4.56	-937.88	8,768.86	6,488.06	6,244.32	243.74	26.618	
9,900.00	6,629.99	3,530.00	3,529.61	205.76	107.20	4.56	-937.88	8,768.86	6,403.96	6,161.46	242.50	26.408	
10,000.00	6,629.99	3,530.00	3,529.61	207.22	107.20	4.56	-937.88	8,768.86	6,320.33	6,079.11	241.22	26.202	
10,100.00	6,629.99	3,530.00	3,529.61	208.72	107.20	4.56	-937.88	8,768.86	6,237.17	5,997.29	239.88	26.001	
10,200.00	6,629.99	3,530.00	3,529.61	210.25	107.20	4.56	-937.88	8,768.86	6,154.52	5,916.02	238.49	25.806	
10,300.00	6,629.99	3,530.00	3,529.61	211.81	107.20	4.56	-937.88	8,768.86	6,072.39	5,835.33	237.05	25.616	
10,400.00	6,629.99	3,530.00	3,529.61	213.40	107.20	4.56	-937.88	8,768.86	5,990.80	5,755.24	235.56	25.433	
10,500.00	6,629.99	3,530.00	3,529.61	215.02	107.20	4.56	-937.88	8,768.86	5,909.77	5,675.77	234.00	25.255	
10,600.00	6,629.99	3,530.00	3,529.61	216.68	107.20	4.56	-937.88	8,768.86	5,829.34	5,596.96	232.38	25.085	
10,700.00	6,629.99	3,530.00	3,529.61	218.36	107.20	4.56	-937.88	8,768.86	5,749.52	5,518.82	230.70	24.922	
10,800.00	6,629.99	3,530.00	3,529.61	220.07	107.20	4.56	-937.88	8,768.86	5,670.34	5,441.38	228.96	24.766	
10,900.00	6,629.99	3,530.00	3,529.61	221.81	107.20	4.56	-937.88	8,768.86	5,591.83	5,364.68	227.14	24.618	
11,000.00	6,629.99	3,530.00	3,529.61	223.58	107.20	4.56	-937.88	8,768.86	5,514.01	5,288.76	225.26	24.479	
11,100.00	6,629.99	3,530.00	3,529.61	225.37	107.20	4.56	-937.88	8,768.86	5,436.92	5,213.63	223.29	24.349	
11,200.00	6,629.99	3,530.00	3,529.61	227.19	107.20	4.56	-937.88	8,768.86	5,360.59	5,139.33	221.25	24.229	
11,300.00	6,629.99	3,530.00	3,529.61	229.04	107.20	4.56	-937.88	8,768.86	5,285.04	5,065.91	219.13	24.119	
11,400.00	6,629.99	3,530.00	3,529.61	230.91	107.20	4.56	-937.88	8,768.86	5,210.32	4,993.40	216.92	24.020	
11,500.00	6,629.99	3,530.00	3,529.61	232.80	107.20	4.56	-937.88	8,768.86	5,136.46	4,921.84	214.62	23.933	
11,600.00	6,629.99	3,530.00	3,529.61	234.72	107.20	4.56	-937.88	8,768.86	5,063.50	4,851.26	212.23	23.858	
11,700.00	6,629.99	3,530.00	3,529.61	236.67	107.20	4.56	-937.88	8,768.86	4,991.47	4,781.72	209.75	23.797	
11,800.00	6,629.99	3,530.00	3,529.61	238.63	107.20	4.56	-937.88	8,768.86	4,920.42	4,713.25	207.17	23.751	
11,850.47	6,629.99	3,530.00	3,529.61	239.63	107.20	4.56	-937.88	8,768.86	4,884.95	4,679.12	205.83	23.733	
11,900.00	6,629.99	3,530.00	3,529.61	240.62	107.20	4.56	-937.88	8,768.86	4,850.39	4,645.91	204.49	23.720	

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

Hilcorp

Lonestar Consulting, LLC

Anticollision Report

LONESTAR CONSULTING

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 412 - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 120-INCLINOMETER

Rule Assigned:

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
11,949.99	6,629.99	3,530.00	3,529.61	241.62	107.20	4.56	-937.88	8,768.86	4,815.78	4,612.68	203.10	23.711	
12,000.00	6,629.99	3,530.00	3,529.61	242.63	107.20	4.56	-937.88	8,768.86	4,781.43	4,579.74	201.70	23.706	
12,049.50	6,629.99	3,530.00	3,529.61	243.63	107.20	4.56	-937.88	8,768.86	4,747.70	4,547.43	200.28	23.706 SF	
12,100.00	6,629.99	3,530.00	3,529.61	244.66	107.20	4.56	-937.88	8,768.86	4,713.59	4,514.78	198.80	23.710	
12,149.01	6,629.99	3,530.00	3,529.61	245.66	107.20	4.56	-937.88	8,768.86	4,680.75	4,483.41	197.34	23.719	
12,200.00	6,629.99	3,530.00	3,529.61	246.71	107.20	4.56	-937.88	8,768.86	4,646.90	4,451.10	195.79	23.734	
12,248.51	6,629.99	3,530.00	3,529.61	247.71	107.20	4.56	-937.88	8,768.86	4,614.98	4,420.69	194.29	23.753	
12,300.00	6,629.99	3,530.00	3,529.61	248.78	107.20	4.56	-937.88	8,768.86	4,581.42	4,388.75	192.67	23.778	
12,348.01	6,629.99	3,530.00	3,529.61	249.78	107.20	4.56	-937.88	8,768.86	4,550.44	4,359.30	191.13	23.808	
12,400.00	6,629.99	3,530.00	3,529.61	250.87	107.20	4.56	-937.88	8,768.86	4,517.21	4,327.78	189.44	23.845	
12,447.50	6,629.99	3,530.00	3,529.61	251.87	107.20	4.56	-937.88	8,768.86	4,487.18	4,299.32	187.86	23.886	
12,500.00	6,629.99	3,530.00	3,529.61	252.98	107.20	4.56	-937.88	8,768.86	4,454.32	4,268.24	186.08	23.937	
12,546.98	6,629.99	3,530.00	3,529.61	253.98	107.20	4.56	-937.88	8,768.86	4,425.25	4,240.78	184.47	23.989	
12,600.00	6,629.99	3,530.00	3,529.61	255.11	107.20	4.56	-937.88	8,768.86	4,392.81	4,210.20	182.61	24.056	
12,646.45	6,629.99	3,530.00	3,529.61	256.10	107.20	4.56	-937.88	8,768.86	4,364.72	4,183.76	180.96	24.120	
12,700.00	6,629.99	3,530.00	3,529.61	257.25	107.20	4.56	-937.88	8,768.86	4,332.73	4,153.71	179.02	24.203	
12,745.92	6,629.99	3,530.00	3,529.61	258.24	107.20	4.56	-937.88	8,768.86	4,305.64	4,128.31	177.33	24.281	
12,800.00	6,629.99	3,530.00	3,529.61	259.41	107.20	4.56	-937.88	8,768.86	4,274.15	4,098.84	175.31	24.381	
12,845.38	6,629.99	3,530.00	3,529.61	260.40	107.20	4.56	-937.88	8,768.86	4,248.07	4,074.49	173.58	24.473	
12,900.00	6,629.99	3,530.00	3,529.61	261.60	107.20	4.56	-937.88	8,768.86	4,217.12	4,045.65	171.48	24.593	
12,944.83	6,630.00	3,530.00	3,529.61	262.58	107.20	4.56	-937.88	8,768.86	4,192.08	4,022.36	169.72	24.700	
13,000.00	6,630.00	3,530.00	3,529.61	263.79	107.20	4.56	-937.88	8,768.86	4,161.72	3,994.19	167.53	24.842	
13,044.27	6,630.00	3,530.00	3,529.61	264.77	107.20	4.56	-937.88	8,768.86	4,137.72	3,971.98	165.74	24.965	
13,100.00	6,630.00	3,530.00	3,529.61	266.01	107.20	4.56	-937.88	8,768.86	4,108.00	3,944.54	163.46	25.131	
13,143.71	6,630.00	3,530.00	3,529.61	266.98	107.20	4.56	-937.88	8,768.86	4,085.07	3,923.42	161.65	25.270	
13,200.00	6,630.00	3,530.00	3,529.61	268.24	107.20	4.56	-937.88	8,768.86	4,056.04	3,896.75	159.29	25.463	
13,243.13	6,630.00	3,530.00	3,529.61	269.20	107.20	4.56	-937.88	8,768.86	4,034.19	3,876.72	157.46	25.620	
13,300.00	6,630.00	3,530.00	3,529.61	270.48	107.20	4.56	-937.88	8,768.86	4,005.90	3,850.88	155.02	25.841	
13,342.54	6,630.00	3,530.00	3,529.61	271.44	107.20	4.56	-937.88	8,768.86	3,985.14	3,831.97	153.17	26.018	
13,400.00	6,630.00	3,530.00	3,529.61	272.74	107.20	4.56	-937.88	8,768.86	3,957.65	3,807.00	150.65	26.271	
13,441.95	6,630.00	3,530.00	3,529.61	273.70	107.20	4.56	-937.88	8,768.86	3,937.99	3,789.21	148.79	26.467	
13,500.00	6,630.00	3,530.00	3,529.61	275.02	107.20	4.56	-937.88	8,768.86	3,911.37	3,765.17	146.19	26.755	
13,541.34	6,630.00	3,530.00	3,529.61	275.96	107.20	4.56	-937.88	8,768.86	3,892.82	3,748.49	144.33	26.972	
13,600.00	6,630.00	3,530.00	3,529.61	277.31	107.20	4.56	-937.88	8,768.86	3,867.11	3,725.45	141.67	27.298	
13,640.72	6,630.00	3,530.00	3,529.61	278.24	107.20	4.56	-937.88	8,768.86	3,849.69	3,709.89	139.80	27.536	
13,700.00	6,630.00	3,530.00	3,529.61	279.61	107.20	4.56	-937.88	8,768.86	3,824.96	3,687.88	137.08	27.903	
13,740.09	6,630.00	3,530.00	3,529.61	280.54	107.20	4.56	-937.88	8,768.86	3,808.67	3,673.44	135.23	28.165	
13,800.00	6,630.00	3,530.00	3,529.61	281.93	107.20	4.56	-937.88	8,768.86	3,784.99	3,652.53	132.45	28.576	
13,839.45	6,630.00	3,530.00	3,529.61	282.85	107.20	4.56	-937.88	8,768.86	3,769.83	3,639.21	130.62	28.860	
13,900.00	6,630.00	3,530.00	3,529.61	284.26	107.20	4.56	-937.88	8,768.86	3,747.25	3,619.44	127.81	29.319	
13,938.79	6,630.00	3,530.00	3,529.61	285.17	107.20	4.56	-937.88	8,768.86	3,733.23	3,607.22	126.01	29.627	
14,000.00	6,630.00	3,530.00	3,529.61	286.60	107.20	4.56	-937.88	8,768.86	3,711.83	3,588.66	123.17	30.135	
14,038.13	6,630.00	3,530.00	3,529.61	287.50	107.20	4.56	-937.88	8,768.86	3,698.95	3,577.53	121.41	30.466	
14,100.00	6,630.00	3,530.00	3,529.61	288.96	107.20	4.56	-937.88	8,768.86	3,678.79	3,560.21	118.57	31.026	
14,137.45	6,630.00	3,530.00	3,529.61	289.85	107.20	4.56	-937.88	8,768.86	3,667.03	3,550.17	116.86	31.379	
14,200.00	6,630.00	3,530.00	3,529.61	291.33	107.20	4.56	-937.88	8,768.86	3,648.18	3,534.15	114.03	31.992	
14,236.77	6,630.00	3,530.00	3,529.61	292.20	107.20	4.56	-937.88	8,768.86	3,637.56	3,525.17	112.39	32.366	
14,300.00	6,630.00	3,530.00	3,529.61	293.71	107.20	4.56	-937.88	8,768.86	3,620.09	3,510.49	109.60	33.031	
14,336.07	6,630.00	3,530.00	3,529.61	294.57	107.20	4.56	-937.88	8,768.86	3,610.58	3,502.55	108.03	33.422	
14,400.00	6,630.00	3,530.00	3,529.61	296.10	107.20	4.56	-937.88	8,768.86	3,594.55	3,489.25	105.30	34.135	
14,435.37	6,630.00	3,530.00	3,529.61	296.95	107.20	4.56	-937.88	8,768.86	3,586.14	3,482.32	103.83	34.540	
14,500.00	6,630.00	3,530.00	3,529.61	298.51	107.20	4.56	-937.88	8,768.86	3,571.64	3,470.44	101.19	35.295	

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

Lonestar Consulting, LLC

Anticollision Report

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 412 - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 120-INCLINOMETER

Rule Assigned:

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
14,534.65	6,630.00	3,530.00	3,529.61	299.34	107.20	4.56	-937.88	8,768.86	3,564.31	3,464.49	99.82	35.707	
14,600.00	6,630.00	3,530.00	3,529.61	300.92	107.20	4.56	-937.88	8,768.86	3,551.39	3,454.07	97.32	36.493	
14,633.93	6,630.00	3,530.00	3,529.61	301.75	107.20	4.56	-937.88	8,768.86	3,545.13	3,449.07	96.07	36.903	
14,700.00	6,630.00	3,530.00	3,529.61	303.35	107.20	4.56	-937.88	8,768.86	3,533.86	3,440.12	93.73	37.702	
14,733.20	6,630.00	3,530.00	3,529.61	304.16	107.20	4.56	-937.88	8,768.86	3,528.64	3,436.03	92.62	38.100	
14,800.00	6,630.00	3,530.00	3,529.61	305.79	107.20	4.56	-937.88	8,768.86	3,519.08	3,428.58	90.50	38.885	
14,832.46	6,630.00	3,530.00	3,529.61	306.58	107.20	4.56	-937.88	8,768.86	3,514.88	3,425.34	89.54	39.254	
14,900.00	6,630.00	3,530.00	3,529.61	308.24	107.20	4.56	-937.88	8,768.86	3,507.09	3,419.38	87.71	39.985	
14,931.73	6,630.00	3,530.00	3,529.61	309.02	107.20	4.56	-937.88	8,768.86	3,503.88	3,416.94	86.94	40.304	
15,000.00	6,630.00	3,530.00	3,529.61	310.70	107.20	4.56	-937.88	8,768.86	3,497.92	3,412.44	85.48	40.920	
15,030.98	6,630.00	3,530.00	3,529.61	311.46	107.20	4.56	-937.88	8,768.86	3,495.66	3,410.73	84.93	41.159	
15,100.00	6,630.00	3,530.00	3,529.61	313.16	107.20	4.56	-937.88	8,768.86	3,491.60	3,407.61	83.99	41.573	
15,130.23	6,630.00	3,530.00	3,529.61	313.91	107.20	4.56	-937.88	8,768.86	3,490.25	3,406.53	83.72	41.692	
15,200.00	6,630.00	3,530.00	3,529.61	315.64	107.20	4.56	-937.88	8,768.86	3,488.13	3,404.67	83.46	41.793	
15,229.43	6,630.00	3,530.00	3,529.61	316.37	107.20	4.56	-937.88	8,768.86	3,487.65	3,404.13	83.53	41.756	
15,300.00	6,630.00	3,530.00	3,529.61	318.13	107.20	4.56	-937.88	8,768.86	3,487.52	3,403.40	84.12	41.460	CC, ES
15,400.00	6,630.00	3,530.00	3,529.61	320.63	107.20	4.56	-937.88	8,768.86	3,489.78	3,403.79	85.99	40.582	
15,500.00	6,630.00	3,530.00	3,529.61	323.13	107.20	4.56	-937.88	8,768.86	3,494.91	3,406.01	88.90	39.314	
15,600.00	6,630.00	3,530.00	3,529.61	325.65	107.20	4.56	-937.88	8,768.86	3,502.88	3,410.31	92.56	37.844	
15,700.00	6,630.00	3,530.00	3,529.61	328.17	107.20	4.56	-937.88	8,768.86	3,513.68	3,416.92	96.76	36.313	
15,800.00	6,630.00	3,530.00	3,529.61	330.71	107.20	4.56	-937.88	8,768.86	3,527.28	3,425.94	101.34	34.807	
15,900.00	6,630.00	3,530.00	3,529.61	333.25	107.20	4.56	-937.88	8,768.86	3,543.65	3,437.47	106.18	33.374	
16,000.00	6,630.00	3,530.00	3,529.61	335.80	107.20	4.56	-937.88	8,768.86	3,562.76	3,451.55	111.21	32.036	
16,100.00	6,630.00	3,530.00	3,529.61	338.35	107.20	4.56	-937.88	8,768.86	3,584.56	3,468.19	116.37	30.804	
16,200.00	6,630.00	3,530.00	3,529.61	340.92	107.20	4.56	-937.88	8,768.86	3,608.99	3,487.40	121.60	29.680	
16,227.67	6,630.00	3,530.00	3,529.61	341.63	107.20	4.56	-937.88	8,768.86	3,616.21	3,493.16	123.05	29.388	

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

Hilcorp

Lonestar Consulting, LLC

Anticollision Report

LONESTAR CONSULTING

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 413S - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 60-INCLINOMETER

Rule Assigned:

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	105.36	-276.66	1,007.41	1,044.72	1,044.72	0.00	N/A	
100.00	100.00	95.77	95.77	3.04	2.54	105.35	-276.60	1,007.41	1,044.69	1,039.11	5.58	187.193	
122.00	122.00	116.92	116.92	3.70	3.19	105.36	-276.65	1,007.41	1,044.70	1,037.81	6.89	151.599	
200.00	200.00	196.00	196.00	6.07	5.59	105.36	-276.66	1,007.41	1,044.71	1,033.05	11.66	89.588	
300.00	300.00	296.00	296.00	9.11	8.62	105.36	-276.66	1,007.41	1,044.71	1,026.97	17.73	58.908	
353.00	352.97	348.97	348.97	10.72	10.23	105.36	-276.66	1,007.41	1,044.71	1,023.76	20.95	49.861	
373.50	373.46	369.43	369.43	11.34	10.85	105.33	-276.13	1,007.41	1,044.57	1,022.37	22.20	47.061	
400.00	399.97	395.81	395.80	12.15	11.66	105.33	-276.14	1,007.41	1,044.57	1,020.77	23.80	43.886	
473.00	472.93	468.41	468.40	14.36	13.86	105.33	-276.23	1,007.41	1,044.59	1,016.37	28.22	37.012	
500.00	499.93	495.27	495.27	15.18	14.68	105.34	-276.29	1,007.41	1,044.61	1,014.75	29.86	34.985	
600.00	599.93	594.79	594.78	18.22	17.70	105.35	-276.62	1,007.41	1,044.70	1,008.78	35.92	29.086	
700.00	699.93	696.03	695.93	21.26	20.77	105.36	-276.66	1,007.41	1,044.71	1,002.68	42.03	24.857	
800.00	799.93	796.03	795.93	24.29	23.81	105.36	-276.66	1,007.41	1,044.71	996.60	48.10	21.718	
836.00	835.85	831.96	831.85	25.39	24.90	105.36	-276.66	1,007.41	1,044.71	994.42	50.29	20.775	
863.14	862.99	858.78	858.64	26.21	25.71	105.26	-274.87	1,007.41	1,044.24	992.31	51.93	20.110 CC	
900.00	899.85	895.01	894.87	27.33	26.81	105.27	-274.96	1,007.41	1,044.26	990.11	54.15	19.286	
1,000.00	999.85	993.32	993.16	30.37	29.80	105.30	-275.62	1,007.41	1,044.44	984.27	60.17	17.359	
1,100.00	1,099.85	1,096.10	1,095.85	33.40	32.92	105.36	-276.66	1,007.41	1,044.71	978.38	66.33	15.751	
1,200.00	1,199.85	1,196.10	1,195.85	36.44	35.96	105.36	-276.66	1,007.41	1,044.71	972.31	72.40	14.430	
1,300.00	1,299.85	1,296.10	1,295.85	39.48	38.99	105.36	-276.66	1,007.41	1,044.71	966.24	78.47	13.313	
1,315.88	1,315.73	1,311.98	1,311.72	39.96	39.48	105.30	-275.63	1,007.41	1,044.44	965.00	79.44	13.148	
1,327.00	1,326.73	1,322.87	1,322.61	40.30	39.81	105.30	-275.63	1,007.41	1,044.44	964.33	80.11	13.038	
1,400.00	1,399.73	1,395.14	1,394.88	42.51	42.00	105.31	-275.76	1,007.41	1,044.47	959.95	84.52	12.358	
1,500.00	1,499.73	1,494.15	1,493.89	45.55	45.01	105.33	-276.24	1,007.41	1,044.60	954.04	90.56	11.535	
1,600.00	1,599.73	1,596.03	1,595.73	48.59	48.10	105.36	-276.66	1,007.41	1,044.71	948.02	96.69	10.805	
1,700.00	1,699.73	1,696.03	1,695.73	51.62	51.14	105.36	-276.66	1,007.41	1,044.71	941.94	102.76	10.166	
1,761.00	1,760.60	1,756.90	1,756.60	53.48	52.99	105.36	-276.66	1,007.41	1,044.71	938.24	106.47	9.813	
1,789.95	1,789.55	1,785.85	1,785.54	54.36	53.87	105.32	-275.89	1,007.41	1,044.50	936.28	108.22	9.651	
1,800.00	1,799.60	1,795.82	1,795.51	54.66	54.17	105.32	-275.89	1,007.41	1,044.50	935.67	108.83	9.597	
1,900.00	1,899.60	1,895.07	1,894.76	57.70	57.18	105.32	-276.05	1,007.41	1,044.55	929.66	114.88	9.092	
2,000.00	1,999.60	1,994.33	1,994.02	60.74	60.20	105.35	-276.49	1,007.41	1,044.66	923.73	120.93	8.638	
2,100.00	2,099.60	2,095.96	2,095.60	63.77	63.29	105.36	-276.66	1,007.41	1,044.71	917.65	127.06	8.222	
2,169.73	2,169.34	2,165.66	2,165.30	65.89	65.40	105.32	-276.04	1,007.41	1,044.54	913.25	131.29	7.956	
2,200.00	2,199.60	2,195.43	2,195.06	66.81	66.31	105.33	-276.07	1,007.41	1,044.55	911.44	133.11	7.847	
2,259.00	2,258.51	2,253.36	2,253.00	68.60	68.07	105.34	-276.29	1,007.41	1,044.61	907.94	136.67	7.644	
2,300.00	2,299.50	2,293.69	2,293.32	69.85	69.29	105.35	-276.56	1,007.41	1,044.68	905.55	139.14	7.508	
2,400.00	2,399.50	2,395.89	2,395.50	72.88	72.39	105.36	-276.66	1,007.41	1,044.71	899.43	145.28	7.191	
2,500.00	2,499.50	2,495.89	2,495.50	75.92	75.43	105.36	-276.66	1,007.41	1,044.71	893.36	151.35	6.903	
2,562.32	2,561.83	2,558.20	2,557.80	77.81	77.32	105.31	-275.85	1,007.41	1,044.49	889.36	155.14	6.733	
2,599.99	2,599.50	2,595.60	2,595.20	78.96	78.46	105.31	-275.87	1,007.41	1,044.50	887.08	157.41	6.635	
2,690.00	2,689.42	2,684.88	2,684.49	81.69	81.17	105.32	-276.07	1,007.41	1,044.55	881.69	162.86	6.414	
2,699.99	2,699.42	2,694.81	2,694.41	81.99	81.47	105.33	-276.10	1,007.41	1,044.56	881.10	163.46	6.390	
2,799.99	2,799.42	2,794.10	2,793.70	85.03	84.49	105.35	-276.60	1,007.41	1,044.69	875.18	169.52	6.163	
2,899.99	2,899.42	2,895.88	2,895.42	88.07	87.58	105.36	-276.66	1,007.41	1,044.71	869.06	175.64	5.948	
2,999.99	2,999.42	2,995.88	2,995.42	91.10	90.61	105.36	-276.66	1,007.41	1,044.71	862.99	181.72	5.749	
3,099.99	3,099.42	3,095.88	3,095.42	94.14	93.65	105.36	-276.66	1,007.41	1,044.71	856.92	187.79	5.563	
3,199.99	3,199.42	3,195.88	3,195.42	97.18	96.69	105.36	-276.66	1,007.41	1,044.71	850.84	193.87	5.389	
3,201.33	3,200.75	3,197.22	3,196.75	97.22	96.73	105.36	-276.66	1,007.41	1,044.71	850.76	193.95	5.387	
3,271.00	3,270.31	3,220.00	3,219.43	99.33	97.42	105.36	-276.66	1,007.41	1,045.76	849.20	196.56	5.320 ES	
3,299.99	3,299.30	3,220.00	3,219.43	100.21	97.42	105.36	-276.66	1,007.41	1,047.46	850.34	197.12	5.314 SF	
3,399.99	3,399.30	3,220.00	3,219.43	103.25	97.42	105.36	-276.66	1,007.41	1,059.41	861.51	197.89	5.353	
3,499.99	3,499.30	3,220.00	3,219.43	106.29	97.42	105.36	-276.66	1,007.41	1,080.52	883.55	196.97	5.486	

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

Hilcorp

Lonestar Consulting, LLC

Anticollision Report

LONESTAR CONSULTING

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 413S - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 60-INCLINOMETER

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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
3,517.00	3,516.25	3,220.00	3,219.43	106.80	97.42	105.36	-276.66	1,007.41	1,084.97	888.30	196.66	5.517	
3,599.99	3,599.25	3,220.00	3,219.43	109.32	97.42	105.36	-276.66	1,007.41	1,110.25	915.68	194.57	5.706	
3,699.99	3,699.25	3,220.00	3,219.43	112.36	97.42	105.36	-276.66	1,007.41	1,147.96	957.00	190.96	6.012	
3,799.99	3,799.24	3,220.00	3,219.43	115.40	97.42	105.36	-276.66	1,007.41	1,192.88	1,006.44	186.44	6.398	
3,899.99	3,899.24	3,220.00	3,219.43	118.44	97.42	105.36	-276.66	1,007.41	1,244.24	1,062.92	181.32	6.862	
3,942.00	3,941.19	3,220.00	3,219.43	119.71	97.42	105.36	-276.66	1,007.41	1,267.51	1,088.46	179.06	7.079	
3,999.99	3,999.18	3,220.00	3,219.43	121.47	97.42	105.36	-276.66	1,007.41	1,301.23	1,125.38	175.85	7.400	
4,099.99	4,099.18	3,220.00	3,219.43	124.51	97.42	105.36	-276.66	1,007.41	1,363.21	1,193.00	170.21	8.009	
4,199.99	4,199.18	3,220.00	3,219.43	127.55	97.42	105.36	-276.66	1,007.41	1,429.51	1,264.94	164.56	8.687	
4,299.99	4,299.18	3,220.00	3,219.43	130.58	97.42	105.36	-276.66	1,007.41	1,499.55	1,340.52	159.03	9.429	
4,399.99	4,399.18	3,220.00	3,219.43	133.62	97.42	105.36	-276.66	1,007.41	1,572.83	1,419.16	153.67	10.235	
4,412.00	4,411.15	3,220.00	3,219.43	133.98	97.42	105.36	-276.66	1,007.41	1,581.79	1,428.75	153.05	10.335	
4,499.99	4,499.14	3,220.00	3,219.43	136.66	97.42	105.36	-276.66	1,007.41	1,648.89	1,500.34	148.55	11.100	
4,599.99	4,599.14	3,220.00	3,219.43	139.69	97.42	105.36	-276.66	1,007.41	1,727.42	1,583.75	143.67	12.023	
4,699.99	4,699.14	3,220.00	3,219.43	142.73	97.42	105.36	-276.66	1,007.41	1,808.07	1,669.01	139.06	13.002	
4,799.99	4,799.14	3,220.00	3,219.43	145.77	97.42	105.36	-276.66	1,007.41	1,890.57	1,755.85	134.72	14.033	
4,899.99	4,899.14	3,220.00	3,219.43	148.80	97.42	105.36	-276.66	1,007.41	1,974.69	1,844.05	130.63	15.116	
4,999.99	4,999.14	3,220.00	3,219.43	151.84	97.42	105.36	-276.66	1,007.41	2,060.23	1,933.43	126.80	16.248	
5,099.99	5,099.14	3,220.00	3,219.43	154.88	97.42	105.36	-276.66	1,007.41	2,147.01	2,023.81	123.20	17.426	
5,199.99	5,199.14	3,220.00	3,219.43	157.91	97.42	105.36	-276.66	1,007.41	2,234.91	2,115.07	119.83	18.650	
5,299.99	5,299.14	3,220.00	3,219.43	160.95	97.42	105.36	-276.66	1,007.41	2,323.78	2,207.11	116.67	19.917	
5,399.99	5,399.14	3,220.00	3,219.43	163.99	97.42	105.36	-276.66	1,007.41	2,413.52	2,299.82	113.70	21.226	
5,415.00	5,414.03	3,220.00	3,219.43	164.44	97.42	105.36	-276.66	1,007.41	2,426.96	2,313.68	113.28	21.424	
5,499.99	5,499.02	3,220.00	3,219.43	167.02	97.42	105.36	-276.66	1,007.41	2,503.94	2,393.01	110.93	22.573	
5,599.99	5,599.02	3,220.00	3,219.43	170.06	97.42	105.36	-276.66	1,007.41	2,595.15	2,486.84	108.31	23.960	
5,699.99	5,699.02	3,220.00	3,219.43	173.10	97.42	105.36	-276.66	1,007.41	2,686.99	2,581.14	105.85	25.384	
5,799.99	5,799.02	3,220.00	3,219.43	176.14	97.42	105.36	-276.66	1,007.41	2,779.40	2,675.85	103.54	26.843	
5,822.00	5,820.97	3,220.00	3,219.43	176.80	97.42	105.36	-276.66	1,007.41	2,799.75	2,696.69	103.05	27.168	
5,900.00	5,898.96	3,220.00	3,219.43	179.17	97.42	105.36	-276.66	1,007.41	2,872.26	2,770.89	101.37	28.335	
5,950.00	5,948.92	3,220.00	3,219.43	179.93	97.42	-16.76	-276.66	1,007.41	2,918.28	2,818.37	99.91	29.208	
6,000.00	5,998.65	3,220.00	3,219.43	179.93	97.42	-14.62	-276.66	1,007.41	2,963.08	2,865.09	97.99	30.238	
6,050.00	6,047.91	3,220.00	3,219.43	179.93	97.42	-12.98	-276.66	1,007.41	3,006.52	2,910.63	95.88	31.356	
6,100.00	6,096.48	3,220.00	3,219.43	179.93	97.42	-11.69	-276.66	1,007.41	3,048.45	2,954.85	93.60	32.569	
6,150.00	6,144.12	3,220.00	3,219.43	179.94	97.42	-10.66	-276.66	1,007.41	3,088.74	2,997.58	91.15	33.885	
6,200.00	6,190.61	3,220.00	3,219.43	179.94	97.42	-9.81	-276.66	1,007.41	3,127.27	3,038.71	88.56	35.311	
6,250.00	6,235.74	3,220.00	3,219.43	179.94	97.42	-9.12	-276.66	1,007.41	3,163.93	3,078.09	85.84	36.860	
6,300.00	6,279.30	3,220.00	3,219.43	179.95	97.42	-8.54	-276.66	1,007.41	3,198.61	3,115.61	82.99	38.541	
6,350.00	6,321.08	3,220.00	3,219.43	179.95	97.42	-8.05	-276.66	1,007.41	3,231.22	3,151.17	80.04	40.368	
6,400.00	6,360.88	3,220.00	3,219.43	179.96	97.42	-7.64	-276.66	1,007.41	3,261.66	3,184.66	77.00	42.357	
6,450.00	6,398.52	3,220.00	3,219.43	179.98	97.42	-7.29	-276.66	1,007.41	3,289.87	3,215.98	73.89	44.525	
6,500.00	6,433.83	3,220.00	3,219.43	180.00	97.42	-7.00	-276.66	1,007.41	3,315.76	3,245.05	70.71	46.891	
6,550.00	6,466.64	3,220.00	3,219.43	180.02	97.42	-6.75	-276.66	1,007.41	3,339.27	3,271.78	67.49	49.476	
6,600.00	6,496.79	3,220.00	3,219.43	180.05	97.42	-6.54	-276.66	1,007.41	3,360.35	3,296.10	64.25	52.301	
6,650.00	6,524.14	3,220.00	3,219.43	180.09	97.42	-6.36	-276.66	1,007.41	3,378.93	3,317.93	61.00	55.391	
6,700.00	6,548.58	3,220.00	3,219.43	180.14	97.42	-6.22	-276.66	1,007.41	3,394.97	3,337.20	57.77	58.766	
6,750.00	6,569.97	3,220.00	3,219.43	180.20	97.42	-6.10	-276.66	1,007.41	3,408.44	3,353.86	54.58	62.446	
6,800.00	6,588.23	3,220.00	3,219.43	180.27	97.42	-6.01	-276.66	1,007.41	3,419.30	3,367.84	51.46	66.441	
6,850.00	6,603.26	3,220.00	3,219.43	180.35	97.42	-5.94	-276.66	1,007.41	3,427.53	3,379.08	48.45	70.747	
6,859.73	6,605.81	3,220.00	3,219.43	180.37	97.42	-5.93	-276.66	1,007.41	3,428.82	3,380.95	47.88	71.618	
6,900.00	6,615.00	3,220.00	3,219.43	180.45	97.42	-5.89	-276.66	1,007.41	3,433.10	3,387.53	45.57	75.334	
6,910.71	6,617.08	3,220.00	3,219.43	180.47	97.42	-5.89	-276.66	1,007.41	3,433.95	3,388.97	44.98	76.347	
6,950.00	6,623.39	3,220.00	3,219.43	180.55	97.42	-5.87	-276.66	1,007.41	3,436.01	3,393.13	42.88	80.135	

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

Hilcorp

Lonestar Consulting, LLC

Anticollision Report

LONESTAR CONSULTING

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 413S - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 60-INCLINOMETER

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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,000.00	6,628.40	3,220.00	3,219.43	180.67	97.42	-5.87	-276.66	1,007.41	3,436.25	3,395.83	40.41	85.026	
7,014.24	6,629.20	3,220.00	3,219.43	180.70	97.42	-5.87	-276.66	1,007.41	3,435.83	3,396.06	39.76	86.408	
7,048.30	6,629.99	3,220.00	3,219.43	180.79	97.42	-5.89	-276.66	1,007.41	3,433.94	3,395.64	38.30	89.654	
7,062.67	6,629.99	3,220.00	3,219.43	180.83	97.42	-5.84	-276.66	1,007.41	3,432.90	3,395.18	37.73	90.993	
7,100.00	6,629.99	3,220.00	3,219.43	180.94	97.42	-5.75	-276.66	1,007.41	3,430.42	3,394.11	36.32	94.459	
7,115.60	6,629.99	3,220.00	3,219.43	180.98	97.42	-5.71	-276.66	1,007.41	3,429.48	3,393.71	35.77	95.882	
7,200.00	6,629.99	3,220.00	3,219.43	181.25	97.42	-5.54	-276.66	1,007.41	3,425.30	3,392.04	33.26	102.979	
7,220.04	6,629.99	3,220.00	3,219.43	181.32	97.42	-5.51	-276.66	1,007.41	3,424.55	3,391.75	32.80	104.406	
7,300.00	6,629.99	3,220.00	3,219.43	181.62	97.42	-5.43	-276.66	1,007.41	3,422.42	3,390.90	31.53	108.560	
7,319.42	6,629.99	3,220.00	3,219.43	181.70	97.42	-5.42	-276.66	1,007.41	3,422.13	3,390.76	31.37	109.099	
7,400.00	6,629.99	3,220.00	3,219.43	182.03	97.42	-5.40	-276.66	1,007.41	3,421.80	3,390.45	31.35	109.139	
7,500.00	6,629.99	3,220.00	3,219.43	182.49	97.42	-5.47	-276.66	1,007.41	3,423.45	3,390.67	32.77	104.456	
7,600.00	6,629.99	3,220.00	3,219.43	183.00	97.42	-5.62	-276.66	1,007.41	3,427.34	3,391.76	35.59	96.313	
7,700.00	6,629.99	3,220.00	3,219.43	183.54	97.42	-5.87	-276.66	1,007.41	3,433.46	3,394.00	39.46	87.008	
7,800.00	6,629.99	3,220.00	3,219.43	184.12	97.42	-6.20	-276.66	1,007.41	3,441.77	3,397.69	44.08	78.077	
7,900.00	6,629.99	3,220.00	3,219.43	184.73	97.42	-6.62	-276.66	1,007.41	3,452.20	3,403.01	49.19	70.179	
7,926.71	6,629.99	3,220.00	3,219.43	184.90	97.42	-6.74	-276.66	1,007.41	3,455.34	3,404.73	50.61	68.269	
8,000.00	6,629.99	3,220.00	3,219.43	185.37	97.42	-6.74	-276.66	1,007.41	3,464.92	3,410.23	54.69	63.355	
8,100.00	6,629.99	3,220.00	3,219.43	186.06	97.42	-6.74	-276.66	1,007.41	3,480.43	3,419.80	60.63	57.406	
8,200.00	6,629.99	3,220.00	3,219.43	186.79	97.42	-6.74	-276.66	1,007.41	3,498.74	3,431.89	66.85	52.336	
8,300.00	6,629.99	3,220.00	3,219.43	187.57	97.42	-6.74	-276.66	1,007.41	3,519.79	3,446.55	73.24	48.061	
8,400.00	6,629.99	3,220.00	3,219.43	188.39	97.42	-6.74	-276.66	1,007.41	3,543.54	3,463.84	79.69	44.464	
8,500.00	6,629.99	3,220.00	3,219.43	189.26	97.42	-6.74	-276.66	1,007.41	3,569.93	3,483.77	86.16	41.432	
8,600.00	6,629.99	3,220.00	3,219.43	190.17	97.42	-6.74	-276.66	1,007.41	3,598.91	3,506.32	92.59	38.868	
8,700.00	6,629.99	3,220.00	3,219.43	191.13	97.42	-6.74	-276.66	1,007.41	3,630.41	3,531.47	98.95	36.691	
8,800.00	6,629.99	3,220.00	3,219.43	192.13	97.42	-6.74	-276.66	1,007.41	3,664.38	3,559.18	105.19	34.835	
8,900.00	6,629.99	3,220.00	3,219.43	193.17	97.42	-6.74	-276.66	1,007.41	3,700.73	3,589.42	111.32	33.245	
9,000.00	6,629.99	3,220.00	3,219.43	194.25	97.42	-6.74	-276.66	1,007.41	3,739.41	3,622.11	117.29	31.880	
9,100.00	6,629.99	3,220.00	3,219.43	195.38	97.42	-6.74	-276.66	1,007.41	3,780.33	3,657.21	123.12	30.705	
9,200.00	6,629.99	3,220.00	3,219.43	196.54	97.42	-6.74	-276.66	1,007.41	3,823.44	3,694.66	128.78	29.690	
9,300.00	6,629.99	3,220.00	3,219.43	197.74	97.42	-6.74	-276.66	1,007.41	3,868.64	3,734.38	134.26	28.814	
9,400.00	6,629.99	3,220.00	3,219.43	198.99	97.42	-6.74	-276.66	1,007.41	3,915.89	3,776.31	139.58	28.056	
9,500.00	6,629.99	3,220.00	3,219.43	200.27	97.42	-6.74	-276.66	1,007.41	3,965.09	3,820.38	144.71	27.400	
9,600.00	6,629.99	3,220.00	3,219.43	201.59	97.42	-6.74	-276.66	1,007.41	4,016.17	3,866.51	149.66	26.835	
9,700.00	6,629.99	3,220.00	3,219.43	202.94	97.42	-6.74	-276.66	1,007.41	4,069.08	3,914.64	154.44	26.348	
9,800.00	6,629.99	3,220.00	3,219.43	204.34	97.42	-6.74	-276.66	1,007.41	4,123.73	3,964.70	159.04	25.930	
9,900.00	6,629.99	3,220.00	3,219.43	205.76	97.42	-6.74	-276.66	1,007.41	4,180.06	4,016.60	163.46	25.573	
10,000.00	6,629.99	3,220.00	3,219.43	207.22	97.42	-6.74	-276.66	1,007.41	4,238.00	4,070.29	167.71	25.270	
10,100.00	6,629.99	3,220.00	3,219.43	208.72	97.42	-6.74	-276.66	1,007.41	4,297.49	4,125.69	171.79	25.015	
10,200.00	6,629.99	3,220.00	3,219.43	210.25	97.42	-6.74	-276.66	1,007.41	4,358.46	4,182.74	175.71	24.804	
10,300.00	6,629.99	3,220.00	3,219.43	211.81	97.42	-6.74	-276.66	1,007.41	4,420.85	4,241.37	179.47	24.632	
10,400.00	6,629.99	3,220.00	3,219.43	213.40	97.42	-6.74	-276.66	1,007.41	4,484.60	4,301.52	183.08	24.495	
10,500.00	6,629.99	3,220.00	3,219.43	215.02	97.42	-6.74	-276.66	1,007.41	4,549.66	4,363.12	186.54	24.390	
10,600.00	6,629.99	3,220.00	3,219.43	216.68	97.42	-6.74	-276.66	1,007.41	4,615.97	4,426.12	189.85	24.314	
10,700.00	6,629.99	3,220.00	3,219.43	218.36	97.42	-6.74	-276.66	1,007.41	4,683.47	4,490.45	193.02	24.264	
10,800.00	6,629.99	3,220.00	3,219.43	220.07	97.42	-6.74	-276.66	1,007.41	4,752.12	4,556.06	196.07	24.237	
10,900.00	6,629.99	3,220.00	3,219.43	221.81	97.42	-6.74	-276.66	1,007.41	4,821.87	4,622.89	198.98	24.233	
11,000.00	6,629.99	3,220.00	3,219.43	223.58	97.42	-6.74	-276.66	1,007.41	4,892.66	4,690.90	201.77	24.249	
11,100.00	6,629.99	3,220.00	3,219.43	225.37	97.42	-6.74	-276.66	1,007.41	4,964.46	4,760.03	204.44	24.283	
11,200.00	6,629.99	3,220.00	3,219.43	227.19	97.42	-6.74	-276.66	1,007.41	5,037.23	4,830.23	207.00	24.335	
11,300.00	6,629.99	3,220.00	3,219.43	229.04	97.42	-6.74	-276.66	1,007.41	5,110.91	4,901.46	209.45	24.402	
11,400.00	6,629.99	3,220.00	3,219.43	230.91	97.42	-6.74	-276.66	1,007.41	5,185.48	4,973.68	211.79	24.484	

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

Lonestar Consulting, LLC

Anticollision Report

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 UN 413S - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 60-INCLINOMETER

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
11,500.00	6,629.99	3,220.00	3,219.43	232.80	97.42	-6.74	-276.66	1,007.41	5,260.88	5,046.84	214.04	24.579	
11,600.00	6,629.99	3,220.00	3,219.43	234.72	97.42	-6.74	-276.66	1,007.41	5,337.10	5,120.91	216.20	24.686	
11,700.00	6,629.99	3,220.00	3,219.43	236.67	97.42	-6.74	-276.66	1,007.41	5,414.09	5,195.83	218.26	24.806	
11,800.00	6,629.99	3,220.00	3,219.43	238.63	97.42	-6.74	-276.66	1,007.41	5,491.83	5,271.59	220.24	24.936	
11,900.00	6,629.99	3,220.00	3,219.43	240.62	97.42	-6.74	-276.66	1,007.41	5,570.27	5,348.13	222.13	25.076	
12,000.00	6,629.99	3,220.00	3,219.43	242.63	97.42	-6.74	-276.66	1,007.41	5,649.39	5,425.44	223.95	25.226	
12,100.00	6,629.99	3,220.00	3,219.43	244.66	97.42	-6.74	-276.66	1,007.41	5,729.17	5,503.47	225.70	25.384	
12,200.00	6,629.99	3,220.00	3,219.43	246.71	97.42	-6.74	-276.66	1,007.41	5,809.57	5,582.21	227.37	25.551	
12,300.00	6,629.99	3,220.00	3,219.43	248.78	97.42	-6.74	-276.66	1,007.41	5,890.58	5,661.60	228.97	25.726	
12,400.00	6,629.99	3,220.00	3,219.43	250.87	97.42	-6.74	-276.66	1,007.41	5,972.16	5,741.64	230.51	25.908	
12,500.00	6,629.99	3,220.00	3,219.43	252.98	97.42	-6.74	-276.66	1,007.41	6,054.29	5,822.30	231.99	26.097	
12,600.00	6,629.99	3,220.00	3,219.43	255.11	97.42	-6.74	-276.66	1,007.41	6,136.95	5,903.54	233.41	26.292	
12,700.00	6,629.99	3,220.00	3,219.43	257.25	97.42	-6.74	-276.66	1,007.41	6,220.12	5,985.34	234.78	26.494	
12,800.00	6,629.99	3,220.00	3,219.43	259.41	97.42	-6.74	-276.66	1,007.41	6,303.78	6,067.69	236.09	26.701	
12,900.00	6,629.99	3,220.00	3,219.43	261.60	97.42	-6.74	-276.66	1,007.41	6,387.91	6,150.56	237.35	26.914	
13,000.00	6,630.00	3,220.00	3,219.43	263.79	97.42	-6.74	-276.66	1,007.41	6,472.49	6,233.93	238.56	27.132	
13,100.00	6,630.00	3,220.00	3,219.43	266.01	97.42	-6.74	-276.66	1,007.41	6,557.51	6,317.78	239.72	27.354	
13,200.00	6,630.00	3,220.00	3,219.43	268.24	97.42	-6.74	-276.66	1,007.41	6,642.94	6,402.09	240.85	27.582	
13,300.00	6,630.00	3,220.00	3,219.43	270.48	97.42	-6.74	-276.66	1,007.41	6,728.77	6,486.85	241.93	27.813	
13,400.00	6,630.00	3,220.00	3,219.43	272.74	97.42	-6.74	-276.66	1,007.41	6,814.99	6,572.03	242.96	28.049	
13,500.00	6,630.00	3,220.00	3,219.43	275.02	97.42	-6.74	-276.66	1,007.41	6,901.59	6,657.62	243.97	28.289	
13,600.00	6,630.00	3,220.00	3,219.43	277.31	97.42	-6.74	-276.66	1,007.41	6,988.54	6,743.61	244.93	28.533	
13,700.00	6,630.00	3,220.00	3,219.43	279.61	97.42	-6.74	-276.66	1,007.41	7,075.83	6,829.97	245.86	28.780	
13,800.00	6,630.00	3,220.00	3,219.43	281.93	97.42	-6.74	-276.66	1,007.41	7,163.46	6,916.71	246.75	29.031	
13,900.00	6,630.00	3,220.00	3,219.43	284.26	97.42	-6.74	-276.66	1,007.41	7,251.41	7,003.79	247.62	29.285	
14,000.00	6,630.00	3,220.00	3,219.43	286.60	97.42	-6.74	-276.66	1,007.41	7,339.66	7,091.21	248.45	29.542	
14,100.00	6,630.00	3,220.00	3,219.43	288.96	97.42	-6.74	-276.66	1,007.41	7,428.22	7,178.96	249.26	29.802	
14,200.00	6,630.00	3,220.00	3,219.43	291.33	97.42	-6.74	-276.66	1,007.41	7,517.06	7,267.03	250.03	30.064	
14,300.00	6,630.00	3,220.00	3,219.43	293.71	97.42	-6.74	-276.66	1,007.41	7,606.17	7,355.39	250.78	30.330	
14,400.00	6,630.00	3,220.00	3,219.43	296.10	97.42	-6.74	-276.66	1,007.41	7,695.56	7,444.05	251.51	30.598	
14,500.00	6,630.00	3,220.00	3,219.43	298.51	97.42	-6.74	-276.66	1,007.41	7,785.20	7,533.00	252.21	30.868	
14,600.00	6,630.00	3,220.00	3,219.43	300.92	97.42	-6.74	-276.66	1,007.41	7,875.10	7,622.21	252.88	31.141	
14,700.00	6,630.00	3,220.00	3,219.43	303.35	97.42	-6.74	-276.66	1,007.41	7,965.23	7,711.69	253.54	31.417	
14,800.00	6,630.00	3,220.00	3,219.43	305.79	97.42	-6.74	-276.66	1,007.41	8,055.60	7,801.43	254.17	31.694	
14,900.00	6,630.00	3,220.00	3,219.43	308.24	97.42	-6.74	-276.66	1,007.41	8,146.19	7,891.41	254.78	31.973	
15,000.00	6,630.00	3,220.00	3,219.43	310.70	97.42	-6.74	-276.66	1,007.41	8,237.00	7,981.62	255.37	32.255	
15,100.00	6,630.00	3,220.00	3,219.43	313.16	97.42	-6.74	-276.66	1,007.41	8,328.02	8,072.07	255.95	32.538	
15,200.00	6,630.00	3,220.00	3,219.43	315.64	97.42	-6.74	-276.66	1,007.41	8,419.24	8,162.74	256.50	32.823	
15,300.00	6,630.00	3,220.00	3,219.43	318.13	97.42	-6.74	-276.66	1,007.41	8,510.66	8,253.62	257.04	33.110	
15,400.00	6,630.00	3,220.00	3,219.43	320.63	97.42	-6.74	-276.66	1,007.41	8,602.28	8,344.71	257.56	33.399	
15,500.00	6,630.00	3,220.00	3,219.43	323.13	97.42	-6.74	-276.66	1,007.41	8,694.07	8,436.00	258.07	33.689	
15,600.00	6,630.00	3,220.00	3,219.43	325.65	97.42	-6.74	-276.66	1,007.41	8,786.05	8,527.49	258.56	33.981	
15,700.00	6,630.00	3,220.00	3,219.43	328.17	97.42	-6.74	-276.66	1,007.41	8,878.20	8,619.16	259.03	34.274	
15,800.00	6,630.00	3,220.00	3,219.43	330.71	97.42	-6.74	-276.66	1,007.41	8,970.52	8,711.02	259.50	34.569	
15,900.00	6,630.00	3,220.00	3,219.43	333.25	97.42	-6.74	-276.66	1,007.41	9,063.00	8,803.05	259.94	34.865	
16,000.00	6,630.00	3,220.00	3,219.43	335.80	97.42	-6.74	-276.66	1,007.41	9,155.63	8,895.26	260.38	35.163	
16,100.00	6,630.00	3,220.00	3,219.43	338.35	97.42	-6.74	-276.66	1,007.41	9,248.43	8,987.63	260.80	35.462	
16,200.00	6,630.00	3,220.00	3,219.43	340.92	97.42	-6.74	-276.66	1,007.41	9,341.37	9,080.16	261.21	35.762	
16,227.67	6,630.00	3,220.00	3,219.43	341.63	97.42	-6.74	-276.66	1,007.41	9,367.11	9,105.78	261.32	35.845	

Lonestar Consulting, LLC

Anticollision Report

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 Unit 2 - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 120-INCLINOMETER

Rule Assigned:

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
5,900.05	5,899.01	5,898.04	5,897.01	0.00	0.00	-55.00	0.00	0.00	0.00	0.00	0.00	0.002	No-Go Zone - Stop Drilling
5,950.00	5,948.92	5,947.96	5,946.92	0.81	1.46	-180.00	0.00	0.00	1.71	-0.56	2.27	0.754	No-Go Zone - Stop Drilling
6,000.00	5,998.65	5,997.68	5,996.65	0.84	2.97	180.00	0.00	0.00	6.83	3.03	3.80	1.799	Collision Risk Procedures Req.
6,050.00	6,047.91	6,046.95	6,045.91	0.86	4.46	180.00	0.00	0.00	15.34	10.02	5.32	2.883	
6,100.00	6,096.48	6,095.51	6,094.47	0.88	5.94	-177.95	1.17	0.00	27.88	21.06	6.82	4.089	
6,150.00	6,144.12	6,143.20	6,142.16	0.89	7.39	-178.69	1.13	0.00	42.99	34.73	8.26	5.203	
6,200.00	6,190.61	6,189.78	6,188.73	0.84	8.80	-179.16	1.01	0.00	61.28	51.66	9.63	6.365	CC, ES, SF
6,250.00	6,235.74	6,235.03	6,233.98	0.82	10.17	-179.47	0.83	0.00	82.68	71.82	10.86	7.613	
6,300.00	6,279.30	6,278.75	6,277.70	1.06	11.50	-179.70	0.59	0.00	107.07	95.36	11.72	9.138	
6,350.00	6,321.08	6,320.74	6,319.69	1.38	12.78	-179.87	0.31	0.00	134.36	120.76	13.60	9.878	
6,400.00	6,360.88	6,360.11	6,358.88	1.77	13.97	180.00	0.00	0.00	164.43	149.13	15.30	10.747	
6,450.00	6,398.52	6,397.75	6,396.52	2.23	15.11	180.00	0.00	0.00	197.32	180.34	16.98	11.622	
6,500.00	6,433.83	6,433.06	6,431.83	2.76	16.19	180.00	0.00	0.00	232.71	214.09	18.62	12.499	
6,550.00	6,466.64	6,465.86	6,464.64	3.35	17.18	180.00	0.00	0.00	270.43	250.21	20.22	13.371	
6,600.00	6,496.79	6,496.01	6,494.79	4.00	18.10	180.00	0.00	0.00	310.31	288.51	21.80	14.236	
6,650.00	6,524.14	6,523.37	6,522.14	4.70	18.93	180.00	0.00	0.00	352.15	328.81	23.33	15.093	
6,700.00	6,548.58	6,547.80	6,546.58	5.46	19.67	180.00	0.00	0.00	395.76	370.94	24.82	15.943	
6,750.00	6,569.97	6,569.20	6,567.97	6.27	20.32	180.00	0.00	0.00	440.94	414.68	26.26	16.788	
6,800.00	6,588.23	6,587.45	6,586.23	7.12	20.88	180.00	0.00	0.00	487.48	459.83	27.65	17.631	
6,850.00	6,603.26	6,602.49	6,601.26	8.00	21.33	180.00	0.00	0.00	535.15	506.19	28.97	18.474	
6,900.00	6,615.00	6,614.36	6,613.09	8.92	21.69	-179.13	2.18	0.00	585.00	554.77	30.23	19.354	
6,950.00	6,623.39	6,622.98	6,621.72	9.86	21.95	-178.80	2.17	0.00	634.28	602.88	31.40	20.201	
7,000.00	6,628.40	6,628.16	6,626.90	10.81	22.11	-177.77	2.17	0.00	684.01	651.53	32.48	21.060	
7,048.30	6,629.99	6,629.84	6,628.58	11.74	22.16	-108.25	2.17	0.00	732.27	698.85	33.43	21.905	
7,100.00	6,629.99	6,629.89	6,628.62	12.74	22.16	-91.24	2.17	0.00	783.96	749.57	34.39	22.797	
7,200.00	6,629.99	6,629.97	6,628.70	14.66	22.17	-90.46	2.17	0.00	883.71	847.51	36.20	24.412	
7,300.00	6,629.99	6,630.04	6,628.77	16.55	22.17	-90.29	2.17	0.00	982.89	944.96	37.93	25.914	
7,400.00	6,629.99	6,630.10	6,628.83	18.39	22.17	-90.22	2.16	0.00	1,081.23	1,041.69	39.54	27.344	
7,500.00	6,629.99	6,630.15	6,628.88	20.14	22.17	-90.17	2.16	0.00	1,178.54	1,137.53	41.01	28.739	
7,600.00	6,629.99	6,630.19	6,628.92	21.80	22.17	-90.14	2.16	0.00	1,274.61	1,232.32	42.29	30.137	
7,700.00	6,629.99	6,630.22	6,628.95	23.32	22.17	-90.12	2.16	0.00	1,369.31	1,325.94	43.37	31.574	
7,800.00	6,629.99	6,630.23	6,628.97	24.69	22.17	-90.10	2.16	0.00	1,462.47	1,418.26	44.21	33.083	
7,900.00	6,629.99	6,630.24	6,628.98	25.89	22.18	-90.09	2.16	0.00	1,553.95	1,509.17	44.78	34.698	
7,926.71	6,629.99	6,630.24	6,628.98	26.18	22.18	-90.08	2.16	0.00	1,578.09	1,533.19	44.89	35.151	
8,000.00	6,629.99	6,630.24	6,628.98	26.94	22.18	-90.08	2.16	0.00	1,644.45	1,599.30	45.14	36.426	
8,100.00	6,629.99	6,630.24	6,628.98	27.96	22.18	-90.08	2.16	0.00	1,735.89	1,690.45	45.44	38.204	
8,200.00	6,629.99	6,630.24	6,628.97	28.95	22.18	-90.08	2.16	0.00	1,828.22	1,782.54	45.69	40.017	
8,300.00	6,629.99	6,630.24	6,628.97	29.93	22.18	-90.08	2.16	0.00	1,921.33	1,875.43	45.90	41.862	
8,400.00	6,629.99	6,630.24	6,628.97	30.89	22.18	-90.08	2.16	0.00	2,015.09	1,969.01	46.08	43.733	
8,500.00	6,629.99	6,630.24	6,628.97	31.84	22.18	-90.08	2.16	0.00	2,109.43	2,063.20	46.23	45.627	
8,600.00	6,629.99	6,630.24	6,628.97	32.78	22.18	-90.08	2.16	0.00	2,204.27	2,157.90	46.36	47.542	
8,700.00	6,629.99	6,630.24	6,628.97	33.71	22.18	-90.08	2.16	0.00	2,299.54	2,253.06	46.48	49.476	
8,800.00	6,629.99	6,630.24	6,628.97	34.65	22.18	-90.08	2.16	0.00	2,395.20	2,348.63	46.57	51.427	
8,900.00	6,629.99	6,630.24	6,628.97	35.58	22.17	-90.08	2.16	0.00	2,491.20	2,444.54	46.66	53.393	
9,000.00	6,629.99	6,630.24	6,628.97	36.51	22.17	-90.08	2.16	0.00	2,587.50	2,540.78	46.73	55.373	
9,100.00	6,629.99	6,630.24	6,628.97	37.45	22.17	-90.08	2.16	0.00	2,684.08	2,637.29	46.79	57.366	
9,200.00	6,629.99	6,630.24	6,628.97	38.39	22.17	-90.08	2.16	0.00	2,780.89	2,734.06	46.84	59.371	
9,300.00	6,629.99	6,630.24	6,628.97	39.35	22.17	-90.08	2.16	0.00	2,877.93	2,831.05	46.88	61.387	
9,400.00	6,629.99	6,630.24	6,628.97	40.31	22.17	-90.08	2.16	0.00	2,975.16	2,928.24	46.92	63.413	
9,500.00	6,629.99	6,630.24	6,628.97	41.28	22.17	-90.08	2.16	0.00	3,072.57	3,025.62	46.95	65.450	
9,600.00	6,629.99	6,630.24	6,628.97	42.27	22.17	-90.08	2.16	0.00	3,170.14	3,123.17	46.97	67.496	
9,700.00	6,629.99	6,630.24	6,628.97	43.27	22.17	-90.08	2.16	0.00	3,267.85	3,220.87	46.99	69.550	

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

Hilcorp

Lonestar Consulting, LLC

Anticollision Report

LONESTAR CONSULTING

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 Unit 2 - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 120-INCLINOMETER

Rule Assigned:

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
9,800.00	6,629.99	6,630.24	6,628.97	44.29	22.17	-90.08	2.16	0.00	3,365.70	3,318.71	47.00	71.613	
9,900.00	6,629.99	6,630.24	6,628.97	45.32	22.17	-90.08	2.16	0.00	3,463.68	3,416.67	47.01	73.685	
10,000.00	6,629.99	6,630.24	6,628.97	46.38	22.17	-90.08	2.16	0.00	3,561.76	3,514.75	47.01	75.764	
10,100.00	6,629.99	6,630.24	6,628.97	47.45	22.17	-90.08	2.16	0.00	3,659.95	3,612.94	47.01	77.851	
10,200.00	6,629.99	6,630.23	6,628.97	48.55	22.17	-90.08	2.16	0.00	3,758.24	3,711.23	47.01	79.945	
10,300.00	6,629.99	6,630.23	6,628.97	49.67	22.17	-90.08	2.16	0.00	3,856.61	3,809.61	47.00	82.047	
10,400.00	6,629.99	6,630.23	6,628.97	50.82	22.17	-90.08	2.16	0.00	3,955.07	3,908.07	47.00	84.155	
10,500.00	6,629.99	6,630.23	6,628.97	51.99	22.17	-90.08	2.16	0.00	4,053.60	4,006.61	46.99	86.270	
10,600.00	6,629.99	6,630.23	6,628.97	53.19	22.17	-90.08	2.16	0.00	4,152.20	4,105.22	46.97	88.392	
10,700.00	6,629.99	6,630.23	6,628.97	54.42	22.17	-90.08	2.16	0.00	4,250.86	4,203.90	46.96	90.521	
10,800.00	6,629.99	6,630.23	6,628.97	55.68	22.17	-90.08	2.16	0.00	4,349.59	4,302.65	46.94	92.655	
10,900.00	6,629.99	6,630.23	6,628.97	56.96	22.17	-90.08	2.16	0.00	4,448.38	4,401.45	46.93	94.796	
11,000.00	6,629.99	6,630.23	6,628.97	58.28	22.17	-90.08	2.16	0.00	4,547.21	4,500.31	46.91	96.943	
11,100.00	6,629.99	6,630.23	6,628.97	59.63	22.17	-90.08	2.16	0.00	4,646.10	4,599.21	46.88	99.096	
11,200.00	6,629.99	6,630.23	6,628.96	61.00	22.17	-90.08	2.16	0.00	4,745.03	4,698.17	46.86	101.255	
11,300.00	6,629.99	6,630.23	6,628.96	62.42	22.17	-90.08	2.16	0.00	4,844.01	4,797.17	46.84	103.419	
11,400.00	6,629.99	6,630.23	6,628.96	63.86	22.17	-90.08	2.16	0.00	4,943.03	4,896.22	46.81	105.590	
11,500.00	6,629.99	6,630.23	6,628.96	65.33	22.17	-90.08	2.16	0.00	5,042.09	4,995.30	46.79	107.766	
11,600.00	6,629.99	6,630.23	6,628.96	66.84	22.17	-90.08	2.16	0.00	5,141.18	5,094.42	46.76	109.947	
11,700.00	6,629.99	6,630.23	6,628.96	68.38	22.17	-90.08	2.16	0.00	5,240.31	5,193.58	46.73	112.134	
11,800.00	6,629.99	6,630.23	6,628.96	69.96	22.17	-90.08	2.16	0.00	5,339.47	5,292.76	46.70	114.326	
11,900.00	6,629.99	6,630.23	6,628.96	71.56	22.17	-90.08	2.16	0.00	5,438.66	5,391.99	46.67	116.524	
12,000.00	6,629.99	6,630.23	6,628.96	73.20	22.17	-90.08	2.16	0.00	5,537.88	5,491.24	46.64	118.727	
12,100.00	6,629.99	6,630.23	6,628.96	74.87	22.17	-90.08	2.16	0.00	5,637.13	5,590.52	46.61	120.935	
12,200.00	6,629.99	6,630.23	6,628.96	76.57	22.17	-90.08	2.16	0.00	5,736.40	5,689.82	46.58	123.149	
12,300.00	6,629.99	6,630.23	6,628.96	78.31	22.17	-90.08	2.16	0.00	5,835.70	5,789.15	46.55	125.367	
12,400.00	6,629.99	6,630.23	6,628.96	80.07	22.17	-90.08	2.16	0.00	5,935.02	5,888.51	46.52	127.591	
12,500.00	6,629.99	6,630.23	6,628.96	81.87	22.17	-90.08	2.16	0.00	6,034.37	5,987.89	46.48	129.819	
12,600.00	6,629.99	6,630.23	6,628.96	83.69	22.17	-90.08	2.16	0.00	6,133.74	6,087.29	46.45	132.053	
12,700.00	6,629.99	6,630.23	6,628.96	85.55	22.17	-90.08	2.16	0.00	6,233.12	6,186.71	46.42	134.291	
12,800.00	6,629.99	6,630.23	6,628.96	87.43	22.17	-90.08	2.16	0.00	6,332.53	6,286.15	46.38	136.534	
12,900.00	6,629.99	6,630.23	6,628.96	89.34	22.17	-90.08	2.16	0.00	6,431.95	6,385.61	46.35	138.782	
13,000.00	6,630.00	6,630.23	6,628.96	91.28	22.17	-90.08	2.16	0.00	6,531.39	6,485.08	46.31	141.035	
13,100.00	6,630.00	6,630.23	6,628.96	93.24	22.17	-90.08	2.16	0.00	6,630.85	6,584.58	46.28	143.292	
13,200.00	6,630.00	6,630.22	6,628.96	95.23	22.17	-90.08	2.16	0.00	6,730.33	6,684.09	46.24	145.554	
13,300.00	6,630.00	6,630.22	6,628.96	97.25	22.17	-90.08	2.16	0.00	6,829.82	6,783.61	46.20	147.821	
13,400.00	6,630.00	6,630.22	6,628.96	99.29	22.17	-90.08	2.16	0.00	6,929.32	6,883.15	46.17	150.092	
13,500.00	6,630.00	6,630.22	6,628.96	101.36	22.17	-90.08	2.16	0.00	7,028.84	6,982.71	46.13	152.368	
13,600.00	6,630.00	6,630.22	6,628.96	103.44	22.17	-90.08	2.16	0.00	7,128.37	7,082.28	46.09	154.648	
13,700.00	6,630.00	6,630.22	6,628.96	105.56	22.17	-90.08	2.16	0.00	7,227.92	7,181.86	46.06	156.933	
13,800.00	6,630.00	6,630.22	6,628.96	107.69	22.17	-90.08	2.16	0.00	7,327.47	7,281.45	46.02	159.222	
13,900.00	6,630.00	6,630.22	6,628.96	109.84	22.17	-90.08	2.16	0.00	7,427.04	7,381.06	45.98	161.515	
14,000.00	6,630.00	6,630.22	6,628.96	112.02	22.17	-90.08	2.16	0.00	7,526.62	7,480.68	45.95	163.813	
14,100.00	6,630.00	6,630.22	6,628.96	114.21	22.17	-90.08	2.16	0.00	7,626.22	7,580.31	45.91	166.115	
14,200.00	6,630.00	6,630.22	6,628.95	116.43	22.17	-90.08	2.16	0.00	7,725.82	7,679.95	45.87	168.421	
14,300.00	6,630.00	6,630.22	6,628.95	118.66	22.17	-90.08	2.16	0.00	7,825.43	7,779.60	45.83	170.732	
14,400.00	6,630.00	6,630.22	6,628.95	120.91	22.17	-90.08	2.16	0.00	7,925.05	7,879.26	45.80	173.046	
14,500.00	6,630.00	6,630.22	6,628.95	123.18	22.17	-90.08	2.16	0.00	8,024.69	7,978.93	45.76	175.365	
14,600.00	6,630.00	6,630.22	6,628.95	125.47	22.17	-90.08	2.16	0.00	8,124.33	8,078.60	45.72	177.688	
14,700.00	6,630.00	6,630.22	6,628.95	127.77	22.17	-90.08	2.16	0.00	8,223.98	8,178.29	45.68	180.015	
14,800.00	6,630.00	6,630.22	6,628.95	130.09	22.17	-90.08	2.16	0.00	8,323.63	8,277.99	45.65	182.346	
14,900.00	6,630.00	6,630.22	6,628.95	132.42	22.17	-90.08	2.16	0.00	8,423.30	8,377.69	45.61	184.682	

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

Hilcorp

Lonestar Consulting, LLC

Anticollision Report

LONESTAR CONSULTING

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan 30-6 Unit 2 - San Juan 30-6 Unit 2 - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 120-INCLINOMETER

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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,000.00	6,630.00	6,630.22	6,628.95	134.77	22.17	-90.08	2.16	0.00	8,522.97	8,477.40	45.57	187.021	
15,100.00	6,630.00	6,630.22	6,628.95	137.13	22.17	-90.08	2.16	0.00	8,622.65	8,577.12	45.53	189.364	
15,200.00	6,630.00	6,630.22	6,628.95	139.51	22.17	-90.08	2.16	0.00	8,722.34	8,676.84	45.50	191.711	
15,300.00	6,630.00	6,630.22	6,628.95	141.90	22.17	-90.08	2.16	0.00	8,822.04	8,776.58	45.46	194.062	
15,400.00	6,630.00	6,630.22	6,628.95	144.31	22.17	-90.08	2.16	0.00	8,921.74	8,876.32	45.42	196.416	
15,500.00	6,630.00	6,630.22	6,628.95	146.72	22.17	-90.08	2.16	0.00	9,021.45	8,976.06	45.39	198.775	
15,600.00	6,630.00	6,630.22	6,628.95	149.15	22.17	-90.08	2.16	0.00	9,121.16	9,075.82	45.35	201.138	
15,700.00	6,630.00	6,630.22	6,628.95	151.60	22.17	-90.08	2.16	0.00	9,220.89	9,175.58	45.31	203.504	
15,800.00	6,630.00	6,630.22	6,628.95	154.05	22.17	-90.08	2.16	0.00	9,320.61	9,275.34	45.27	205.874	
15,900.00	6,630.00	6,630.22	6,628.95	156.52	22.17	-90.08	2.16	0.00	9,420.35	9,375.11	45.24	208.247	
16,000.00	6,630.00	6,630.22	6,628.95	158.99	22.17	-90.08	2.16	0.00	9,520.09	9,474.89	45.20	210.625	
16,100.00	6,630.00	6,630.22	6,628.95	161.48	22.17	-90.08	2.16	0.00	9,619.83	9,574.67	45.16	213.006	
16,200.00	6,630.00	6,630.21	6,628.95	163.98	22.17	-90.08	2.16	0.00	9,719.58	9,674.45	45.13	215.391	
16,227.67	6,630.00	6,630.21	6,628.95	164.67	22.17	-90.08	2.16	0.00	9,747.18	9,702.06	45.12	216.051	

Hilcorp

Lonestar Consulting, LLC

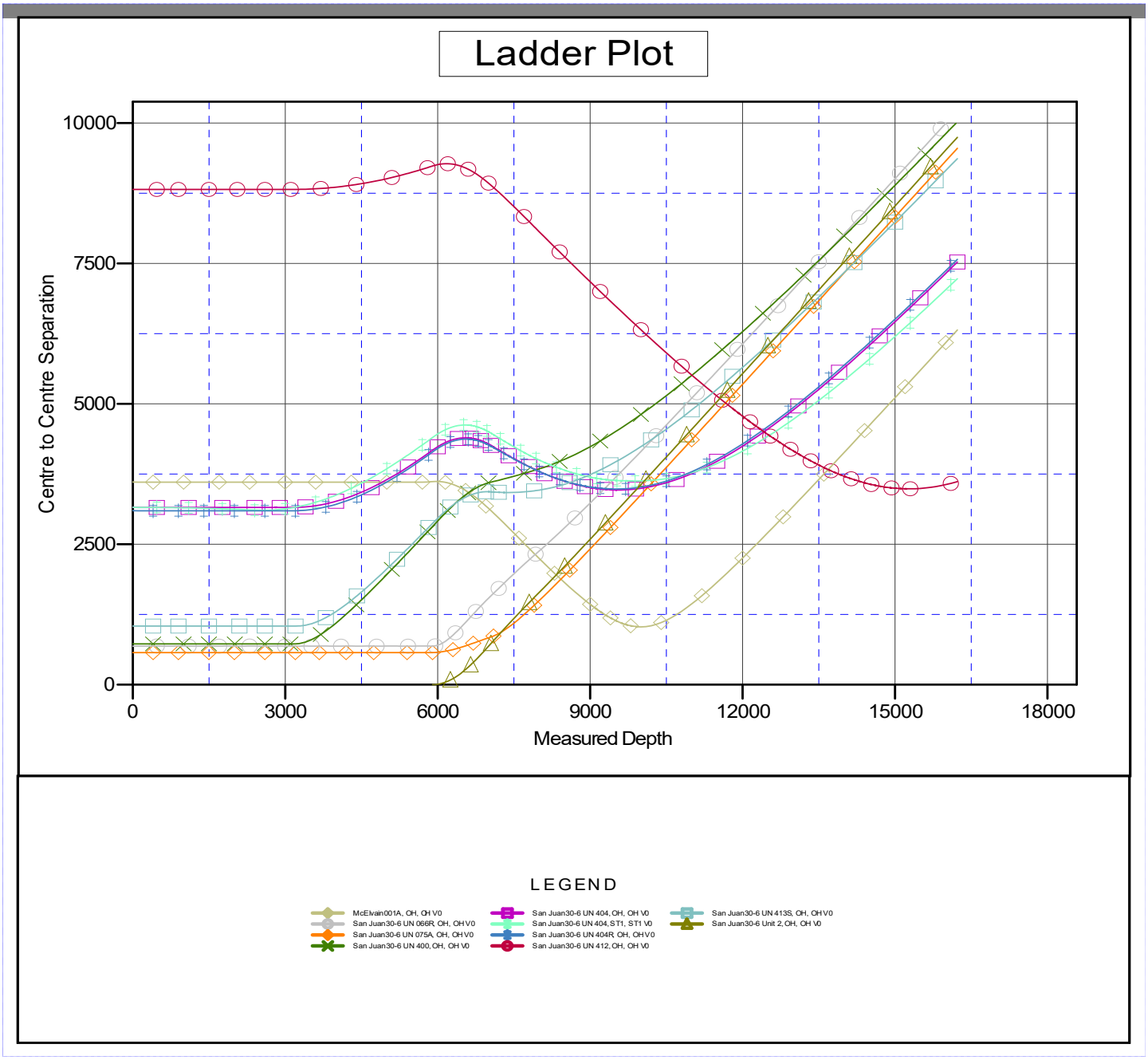
Anticollision Report

LONESTAR CONSULTING

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to GL 6267' @ 6267.00usft
Offset Depths are relative to Offset Datum
Central Meridian is -107.8333334

Coordinates are relative to: San Juan 30-6 Unit 2
Coordinate System is US State Plane 1927 (Exact solution), New Mexico West 30
Grid Convergence at Surface is: 0.17°



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

Hilcorp

Lonestar Consulting, LLC

Anticollision Report

LONESTAR CONSULTING

Company:	HilCorp	**Local Co-ordinate Reference:**	Well San Juan 30-6 Unit 2
Project:	Rio Arriba, NM NAD27	**TVD Reference:**	GL 6267' @ 6267.00usft
Reference Site:	San Juan 30-6 Unit 2	**MD Reference:**	GL 6267' @ 6267.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	San Juan 30-6 Unit 2	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ST1	**Database:**	EDMDB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to GL 6267' @ 6267.00usft
Offset Depths are relative to Offset Datum
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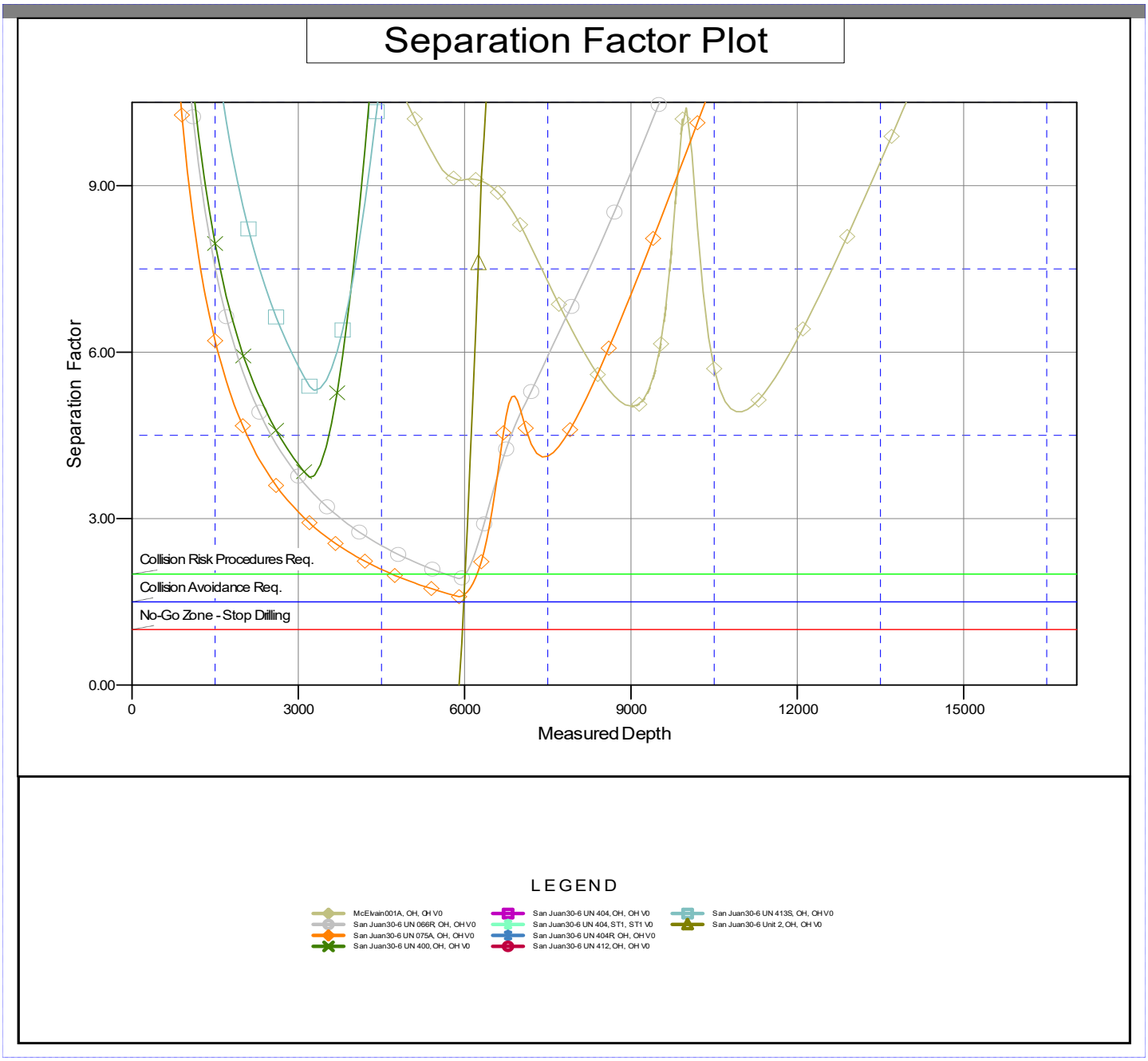

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

BLM - FFO - Geologic Report

Date Completed: Aug. 20 2024

Well No.	San Juan 30-6 Unit 2	Surf. Loc.	**285**	FNL	**590**	FWL	
API	3003924518		**T. 30 N**	**R. 07 W**	Sectio		23
Operator	HilCorp	County	Rio Arriba		State	NM	
Elevation	6277						

Geologic Formations	Tops	Remarks
Mancos	5860	Oil/Gas
Gallup	6126	Possible Coal
Sonostee	7088	
Greenhorn	7396	
Graneros	7450	
Dakota	7596	Oil/Gas
Morrison	7847	

Completed by Alek Knapowski

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

CONDITIONS

Operator:	OGRID:
HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	372171
	Action Number: 380499
	Action Type: [C-103] NOI Recompletion (C-103E)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Notify the OCD inspection supervisor via email 24 Hours Prior to beginning operations.	4/26/2025
ward.rikala	Prior to further recompletion or well bore plugging, the temporary plugged formation shall be permanently plugged.	4/26/2025
ward.rikala	All conducted logs shall be submitted to the OCD as a [UF-WL] EP Well Log Submission (WellLog).	4/26/2025
ward.rikala	If Cement is not adequate to protect casing and isolate strata: (a) the uppermost perforation in each additional pool to at least 150 feet above that perforation; and (b) the lowermost perforation in each added pool to at least 100 feet below that perforation, the appropriate Inspection supervisor shall be consulted and remedial action conducted as directed.	4/26/2025
ward.rikala	A C-104 packet is required if, a pool is added, or perforations are added above or below existing perfs.	4/26/2025