



Application for Permit to Drill

APD Package Report

Date Printed:

APD ID:	Well Status:
APD Received Date:	Well Name:
Operator:	Well Number:

APD Package Report Contents

- Form 3160-3
- Operator Certification Report
- Application Report
- Application Attachments
 - Well Plat: 2 file(s)
- Drilling Plan Report
- Drilling Plan Attachments
 - Blowout Prevention Choke Diagram Attachment: 1 file(s)
 - Blowout Prevention BOP Diagram Attachment: 1 file(s)
 - Casing Design Assumptions and Worksheet(s): 1 file(s)
 - Diagram of the equipment for the circulating system in accordance with Onshore Order #2: 2 file(s)
 - Proposed horizontal/directional/multi-lateral plan submission: 16 file(s)
 - Other Facets: 2 file(s)
- SUPO Report
- SUPO Attachments
 - Existing Road Map: 1 file(s)
 - Existing Road Improvement Attachment: 1 file(s)
 - New Road Map: 1 file(s)
 - Road Drainage Control Structures (DCS) attachment: 1 file(s)
 - New road access plan attachment: 1 file(s)
 - Attach Well map: 2 file(s)
 - Water source and transportation map: 1 file(s)
 - Construction Materials source location attachment: 2 file(s)
 - Well Site Layout Diagram: 1 file(s)
 - Recontouring attachment: 1 file(s)
 - Surface use plan certification document: 6 file(s)
 - Other SUPO Attachment: 4 file(s)
- PWD Report

- PWD Attachments
 - None

- Bond Report
- Bond Attachments
 - None

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input type="checkbox"/> DRILL <input type="checkbox"/> REENTER 1b. Type of Well: <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other 1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		5. Lease Serial No. 6. If Indian, Allottee or Tribe Name 7. If Unit or CA Agreement, Name and No. 8. Lease Name and Well No.
2. Name of Operator		9. API Well No.
3a. Address	3b. Phone No. (include area code)	10. Field and Pool, or Exploratory
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		11. Sec., T. R. M. or Blk. and Survey or Area
14. Distance in miles and direction from nearest town or post office*		12. County or Parish
		13. State
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration

24. Attachments

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

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

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

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



INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM I: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM connects this information to a new evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Connection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

Additional Operator Remarks

Location of Well

0. SHL: NENE / 196 FNL / 477 FEL / TWSP: 32N / RANGE: 07W / SECTION: 15 / LAT: 37.0238003 / LONG: -107.5885303 (TVD: 0 feet, MD: 0 feet)
PPP: NWNW / 840 FNL / 1025 FWL / TWSP: 32N / RANGE: 07W / SECTION: 14 / LAT: 37.0238003 / LONG: -107.5885303 (TVD: 2820 feet, MD: 3343 feet)
BHL: NWNW / 840 FNL / 1025 FWL / TWSP: 32N / RANGE: 07W / SECTION: 14 / LAT: 37.0238003 / LONG: -107.5885303 (TVD: 2962 feet, MD: 3679 feet)
PPP: NWNW / 738 FNL / 786 FWL / TWSP: 32N / RANGE: 07W / SECTION: 14 / LAT: 37.019 / LONG: -107.576 (TVD: 2878 feet, MD: 6046 feet)
PPP: NWNW / 1107 FNL / 1378 FWL / TWSP: 32N / RANGE: 07W / SECTION: 14 / LAT: 37.021297 / LONG: -107.582203 (TVD: 2878 feet, MD: 6046 feet)
BHL: SENE / 1922 FNL / 716 FEL / TWSP: 32N / RANGE: 07W / SECTION: 14 / LAT: 37.0191154 / LONG: -107.5710951 (TVD: 2870 feet, MD: 7546 feet)
PPP: NENW / 721 FNL / 745 FWL / TWSP: 32N / RANGE: 07W / SECTION: 14 / LAT: 37.022287 / LONG: -107.577667 (TVD: 2891 feet, MD: 3683 feet)
PPP: NENW / 728 FNL / 1378 FWL / TWSP: 32N / RANGE: 07W / SECTION: 14 / LAT: 37.022351 / LONG: -107.582187 (TVD: 2891 feet, MD: 3683 feet)
BHL: NENE / 798 FNL / 721 FEL / TWSP: 32N / RANGE: 07W / SECTION: 14 / LAT: 37.0222029 / LONG: -107.5711407 (TVD: 2850 feet, MD: 7214 feet)

BLM Point of Contact

Name: ASHLEY C HITCHELL

Title: LIE

Phone: (970) 385-1304

Email: ahitchell@blm.gov

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Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

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Conditions of Approval - Surface

Well Name:	Southern Ute 703H & 705H Proposed Natural Gas Wells
Lease Number:	14201516
Location:	Sections 15, T. 32 N., R. 7 W. La Plata County, Colorado
Operator:	Hilcorp Energy Company
Application:	Application for Permit to Drill (APD)

The following mitigation measures were derived from the Southern Ute 701H, 702H, 703H, & 705H Proposed Natural Gas Wells, Well Pads, and Pipelines EA (DOI-BLM-CO-S010-2017-0016-EA) and will be attached to the Applications for Permit to Drill as Conditions of Approval and only apply to the Federal action.

Air Quality

1. The operator shall prevent and abate fugitive dust as needed, whether created by vehicular traffic, equipment operations, or wind events. Well pad and roads must be surfaced or dust inhibitors must be used (eg. surfacing materials, non-saline dust suppressants, water, etc.), as appropriate, on roads and wells locations constructed on soils susceptible to wind erosion to reduce the amount of fugitive dust generated by traffic of other activities.
2. During construction activities or heavy vehicle traffic during drilling and completion operations, the operator shall apply freshwater to travel paths/roads twice daily, unless soil conditions do not warrant water application or written approval is acquired for application of surfactants.
3. Vehicle speed shall not exceed 20 miles per hour on the access roads. No matter the speed of the vehicle, when travel on roads results in dust plumes that exceed the height of the vehicle, travel speeds shall be reduced.
4. Utilize green completions for the completion operations for the wells. If green completions is not feasible, route all natural gas produced during well completion to a combustion device. No natural gas produced during completions can be vented to the atmosphere.
5. All new and replacement internal combustion gas field engines must meet New Source Performance Standards (NSPS) (40 CFR 60, Subpart JJJJ). Additionally, all new and replacement internal combustion gas field engines greater than or equal to 500 design-rate horsepower (*or site de-rated horsepower values, as long as manufacturer de-ration values and emission factors are supplied and current demonstration compliant with appropriate emission rate requirement*) must not emit more than 1 gram of NO_x per horsepower-hour.

6. All prime mover diesel drilling rig engines must meet Tier 2 (or better) emission standards.
7. Operator must comply with all applicable sections of New Source Performance Standards OOOO and OOOOa for gas well affected facilities during well completion activities.
8. An Oil and Gas Facility Air Quality Monitoring Annual Report must be submitted to the SUT Air Quality Program by April 1st of each year. The reporting form can be found on the SUT DOEs website at the following link: <https://www.suitdoe.com/wp-content/uploads/sites/9/2018/04/AirQualityReportForm1.pdf>

Federally Protected Species and Habitat

9. The operator must equip and maintain all open-vent exhaust stacks on production equipment to prevent birds from entering, and to discourage perching, roosting, and nesting. (Recommended enclosure structures on open-vent exhaust stacks are in the shape of a cone.)
10. The operator must install and maintain enclosure fencing for all open well cellars to prevent access to wildlife before and after drilling operations until the cellar is backfilled or covered/screened properly.
11. The operator must install and maintain a rigid screen over all open-topped tanks holding production fluid to prevent wildlife entry.

Noise

12. Noise generated from the production equipment must be oriented in such a way to direct the least amount of noise toward nearby residents.

Water Resources – Ground Water

13. The operator shall install storage tanks with a secondary containment structure of sufficient capacity to contain at least 110% of the storage capacity of the largest storage tank. The operator shall prevent livestock from entering the secondary containment area by installing an enclosure fence.
14. Chemical containers shall be clearly labeled, maintained in good condition, and placed within a secondary containment structure. Small secondary containment basins must be screened to prevent wildlife entry.
15. Below-grade tanks must be equipped with an appropriate leak detection system. The walls and floors must be double-walled if the tank comes into contact with soil.
16. In the event that domestic ground water well degradation is caused by a gas well, the gas well must be remediated or other action taken as determined by the appropriate agency.

NOTICE TO OPERATORS

All Spud notifications must be given to BLM personnel directly. **Do not leave messages on answering machines.** Spud notices are to be phoned into the BLM office during regular working hours (Monday-Friday, 8:00-4:30).

If any operations are to start over the weekend or holiday, notify this office by **noon** Friday or the day prior to the holiday. If any problems arise after hours or on weekends, call BLM personnel using the home phone numbers listed below. **Do not leave messages on answering machines.**

Rodney Brashear	Lead Technician	work: 970-385-1347	cell: 970-799-1244
Alan White	Technician	work: 970-385-1201	cell: 970-317-0329
Nathan Willis	Technician	work: 970-385-1349	cell: 970-749-1734
Bryan Clappe	Technician	work: 970-385-1364	cell: 970-903-9077
Joe Killins	Petroleum Engineer	work: 970-385-1363	cell: 970-759-8988

PLEASE NOTE:

1. Approved for a period not to exceed 2 years.
2. Approval of this agreement does not warrant or certify that the operator thereof and other holders of operating rights hold legal or equitable title to those rights in the subject lease which are committed hereto.
3. See Site Specific Conditions of Approval.

INFORMATIONAL NOTICE - APDs

Tres Rios Field Office

This notice is an abstract of some major regulations and Onshore Orders and includes notification requirements and information.

1. Drilling Operations (Onshore Order No. 2)
 - a. If DSTs are run, all applicable safety precautions outlined in Onshore Order No. 2 shall be observed.
 - b. All indications of usable water (10,000 ppm or less TDS) shall be reported to the Tres Rios Field Office prior to running the next string of casing or before plugging orders are requested, whichever occurs first.
2. Well Abandonment (43 CFR 3162.3-4, Onshore Order No. 1-Sec.V)

Approval for abandonment shall be obtained prior to beginning plugging operations. Initial approval for plugging operations may be verbal, but shall be followed-up in writing within 30 days. Subsequent and final abandonment notifications are required and shall be submitted on Sundry Notice (Form 3160-5), in triplicate.

3. Reports and Notifications (43 CFR 3162.3-2, 3162.4-1, 3162.4-3, 00-6)
 - a. Within 30 days of completion of the well as a dry hole or producer, a copy of all logs, core descriptions, core analyses, well-test data, geologic summaries, sample descriptions or data obtained and compiled during the drilling, work over, and/or completion operations shall be filed with a Completion Report (Form 3160-4), in triplicate. Submit casing/cementing reports and other subsequent reports via Sundry Notice, Form 3160-5.
 - b. In accordance with 43 CFR 3162.4-3, this well shall be reported on BLM Form 3160-6, Monthly Report of Operations, starting with the month in which drilling operations commence, and continuing each month until the well is physically plugged and abandoned.
 - c. Notify this office within 5 business days of production start-up if either of the following two conditions occur:
 - (1) The well is placed on production, or
 - (2) The well resumes production after being off production for more than 90 days.

Placed on production means shipment or sales of hydrocarbons from temporary tanks, production into permanent facilities or measurement through permanent facilities. Notification may be written or verbal with written follow-up within 15 days.

- d. As per Onshore Order No. 6, III.A.2.b., if hydrogen sulfide is present the operator shall initially test the H₂S concentration of the gas stream for each well or production facility. Submit the results of this test within 30 days of filing Form 3160-4, Well Completion or Recompletion Report and Log.
4. Environmental obligations and disposition of production (00-7, NTL-3A, 43 CFR 3162.5-1, 3162.7 and 40 CFR 302-4)

If underground injection is proposed, an EPA or State UIC permit shall also be required and submitted to this office.

 - a. Spills, accidents, fires, injuries, blowout and other undesirable events shall be reported to this office within the time frames in NTL-3A.

- b. Venting and flaring of gas during drilling, completion, initial production testing, subsequent well operations and emergencies are governed by 43CFR 3179.1
- c. Off-lease measurement and commingling of production must be approved by the authorized officer.

5. Well Identification (43 CFR 3162.6)

Each drilling, producing or abandoned well on Tribal Or Federal lands shall be identified as follows. All signs will be legible and in a conspicuous place.

Drilling wells shall have items 1-4

Producing and abandon wells shall have items 1-6

The well sign for the reference well must include:

1. Name of the operator
2. API Number
3. SL (surface location – QtrQtr), Township and Range
4. SL lease number
5. BHL (bottom hole location Qtr Qtr-end of lateral if appropriate), Township and Range
6. BHL lease number or Communitization Agreement Number (if applicable) and whether lease is Tribal or Allotted.

6. Bureau of Land Management, Tres Rios Field Office Address and Contacts:

ADDRESS: Public Lands Center
161 Burnett Drive Unit 4
Durango, Colorado 81301

BUSINESS HOURS: 7:45 A.M. to 4:30 P.M. (Mountain Time), Monday-Friday

AFTER HOURS:

Rodney Brashear	Lead Petroleum Engineering Technician Home: (970) 588-3699 Cell: (970) 799-1244
Alan White	Petroleum Engineering Technician Home: Cell: (970) 317-0329
Nathan Willis	Petroleum Engineering Technician Home: Cell: (970) 749-1734
Bryan Clappe	Petroleum Engineering Technician Cell: (970) 903-9077



United States Department of the Interior



BUREAU OF LAND MANAGEMENT
Tres Rios Field Office
161 Burnett Drive - Unit 4
Durango, CO 81301-3647

In Reply Refer To:
COA APD ID: 10400092029

HILCORP ENERGY COMPANY
SOUTHERN UTE 705H

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

I. GENERAL

- A. Prior approval by the BLM-Authorized Office (Drilling and Production Section) is required for variance from the approved drilling program and before commencing plugging operations, plug back work casing repair work, corrective cementing operations, or suspending drilling operations indefinitely. Emergency approval may be obtained orally, but such approval is contingent upon filing of a notice of intent (on a Sundry Notice, Form 3160-5) within three business days (original and three copies of Federal leases and an original and four copies on Indian leases). **Any changes to the approved plan or any questions regarding drilling operations should be directed to BLM during regular business hours via Sundry Notice. Emergency program changes after hours should be directed to Joe Killins at (970) 759-8988.**
- B. Notify this office at least 24 hours in advance prior to the following:
- a. Well Spud
 - b. Running and cementing casing
 - i. Submit a cement evaluation log if cement is not circulated to surface.
 - c. BOP test
 - i. In the event a BLM inspector is not present during the initial BOP test, please provide chart record.
- C. Each well shall have a well sign in legible condition from spud date to final abandonment. The sign should show the operator's name, lease serial number, or unit name, well number, location of the well, and whether lease is Tribal or Allotted, (See 43 CFR 3162.6(b)).
- D. A complete copy of the approved Application for Permit to Drill, along with any conditions of approval, shall be available to authorized personnel at the drill site whenever active drilling operations are under way. All operations will be governed by Onshore Order #2 unless specifically modified prior to operations.

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COLORADO, NEW MEXICO, UTAH, WYOMING

- E. From the time drilling operations are initiated and until drilling operations are completed, a member of the drilling crew or the tool pusher shall always maintain rig surveillance, unless the well is secured with blowout preventers or cement plugs.
- F. On directional/horizontal wells submit as drilled directional survey from surface to total depth.

II. Site Specific

III. PHONE NUMBERS

Rodney Brasher	Lead Technician	work: 970-385-1347	cell: 970-799-1244
Alan White	Technician	work: 970-385-1201	cell: 970-317-0329
Nathan Willis	Technician	work: 970-385-1349	cell: 970-749-1734
Bryan Clappe	Technician	work: 970-385-1364	cell: 970-903-9077
Joe Killins	Engineer	work: 970-385-1363	cell: 970-759-8988

Operator

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NAME: AMANDA WALKER**Signed on:** 05/03/2023**Title:** Operations/Regulatory Technician**Street Address:** 1111 TRAVIS ST**City:** HOUSTON**State:** TX**Zip:** 77002**Phone:** (346)237-2177**Email address:** MWALKER@HILCORP.COM**Field****Representative Name:****Street Address:****City:****State:****Zip:****Phone:****Email address:**

APD ID: 10400092029

Submission Date: 05/03/2023

Highlighted data reflects the most recent changes
[Show Final Text](#)

Operator Name: HILCORP ENERGY COMPANY

Well Name: SOUTHERN UTE

Well Number: 705H

Well Type: COALBED NATURAL GAS WELL

Well Work Type: Drill

Section 1 - General

APD ID: 10400092029

Tie to previous NOS? N

Submission Date: 05/03/2023

BLM Office: Durango

User: AMANDA WALKER

Title: Operations/Regulatory Technician

Federal/Indian APD: IND

Is the first lease penetrated for production Federal or Indian? IND

Lease number: 14201516

Lease Acres: 2168

Surface access agreement in place? N

Allotted? N

Reservation: SOUTHERN UTE

Agreement in place? NO

Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? Y

Permitting Agent? NO

APD Operator: HILCORP ENERGY COMPANY

Operator letter of

Operator Info

Operator Organization Name: HILCORP ENERGY COMPANY

Operator Address: 382 ROAD 3100

Zip: 87410

Operator PO Box:

Operator City: AZTEC

State: NM

Operator Phone: (999)999-9999

Operator Internet Address:

Section 2 - Well Information

Well in Master Development Plan? NO

Master Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: SOUTHERN UTE

Well Number: 705H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: IGNACIO BLANCO Pool Name: FRUITLAND COAL

Operator Name: HILCORP ENERGY COMPANY

Well Name: SOUTHERN UTE

Well Number: 705H

Is the proposed well in an area containing other mineral resources? NONE

Is the proposed well in a Helium production area? N Use Existing Well Pad? N New surface disturbance?

Type of Well Pad: MULTIPLE WELL

Multiple Well Pad Name: SOUTHERN UTE

Number: 705H

Well Class: MULTI-LATERAL

Number of Legs: 3

Well Work Type: Drill

Well Type: COALBED NATURAL GAS WELL

Describe Well Type:

Well sub-Type: OTHER

Describe sub-type:

Distance to town:

Distance to nearest well: 1110 FT

Distance to lease line: 178 FT

Reservoir well spacing assigned acres Measurement: 320 Acres

Well plat: SHEET_C_20230503121327.pdf

Southern_Ute_705H_cert_6_20_23_20230620114222.pdf

Well work start Date: 07/31/2023

Duration: 45 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83

Vertical Datum: NAVD88

Survey number: 0038275

Reference Datum: KELLY BUSHING

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this
SHL Leg #1	196	FNL	477	FEL	32N	07 W	15	Aliquot NENE	37.0238003	-107.5885303	LA PLATA	COL ORADO	NEW MEXICO	F	FEE	6288	0	0	N
KOP Leg #1	196	FNL	477	FEL	32N	07 W	15	Aliquot NENE	37.0238003	-107.5885303	LA PLATA	COL ORADO	NEW MEXICO	F	FEE	3468	3343	2820	N

Operator Name: HILCORP ENERGY COMPANY

Well Name: SOUTHERN UTE

Well Number: 705H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this
PPP Leg #1-1	840	FNL	1025	FWL	32N	07W	14	Aliquot NWNW	37.0238003	-107.5885303	LA PLATA	COLORADO	NEW MEXICO	F	FEE	3468	3343	2820	N
EXIT Leg #1	840	FNL	1025	FWL	32N	07W	14	Aliquot NWNW	37.0238003	-107.5885303	LA PLATA	COLORADO	NEW MEXICO	F	FEE	3326	3679	2962	N
BHL Leg #1	840	FNL	1025	FWL	32N	07W	14	Aliquot NWNW	37.0238003	-107.5885303	LA PLATA	COLORADO	NEW MEXICO	F	FEE	3326	3679	2962	N
KOP Leg #2	738	FNL	786	FWL	32N	07W	14	Aliquot NWNW	37.019	-107.576	LA PLATA	COLORADO	NEW MEXICO	F	FEE	3410	6046	2878	Y
PPP Leg #2-1	738	FNL	786	FWL	32N	07W	14	Aliquot NWNW	37.019	-107.576	LA PLATA	COLORADO	NEW MEXICO	F	FEE	3410	6046	2878	Y
PPP Leg #2-2	1107	FNL	1378	FWL	32N	07W	14	Aliquot NWNW	37.021297	-107.582203	LA PLATA	COLORADO	NEW MEXICO	F	FEE	3410	6046	2878	Y
EXIT Leg #2	192	FNL	716	FEL	32N	07W	14	Aliquot SENE	37.0191154	-107.5710951	LA PLATA	COLORADO	NEW MEXICO	I	14201516	3418	7546	2870	Y
BHL Leg #2	192	FNL	716	FEL	32N	07W	14	Aliquot SENE	37.0191154	-107.5710951	LA PLATA	COLORADO	NEW MEXICO	I	14201516	3418	7546	2870	Y
KOP Leg #3	721	FNL	745	FWL	32N	07W	14	Aliquot NWNW	37.022	-107.583	LA PLATA	COLORADO	NEW MEXICO	F	FEE	3397	3683	2891	Y
PPP Leg #3-1	721	FNL	745	FWL	32N	07W	14	Aliquot NENW	37.022287	-107.577667	LA PLATA	COLORADO	NEW MEXICO	F	FEE	3397	3683	2891	Y
PPP Leg #3-2	728	FNL	1378	FWL	32N	07W	14	Aliquot NENW	37.022351	-107.582187	LA PLATA	COLORADO	NEW MEXICO	I	14201516	3397	3683	2891	Y
EXIT Leg #3	798	FNL	721	FEL	32N	07W	14	Aliquot NENE	37.0222029	-107.5711407	LA PLATA	COLORADO	NEW MEXICO	F	FEE	3438	7214	2850	Y
BHL Leg #3	798	FNL	721	FEL	32N	07W	14	Aliquot NENE	37.0222029	-107.5711407	LA PLATA	COLORADO	NEW MEXICO	F	FEE	3438	7214	2850	Y

Operator Name: HILCORP ENERGY COMPANY

Well Name: SOUTHERN UTE

Well Number: 705H

CONFIDENTIAL

HILCORP SAN JUAN, L.P.
SOUTHERN UTE 705H
196' FNL & 477' FEL (SURFACE) SECTION 15,
840' FNL & 1025' FWL (PILOT BOTTOM HOLE) SECTION 14,
1922' FNL & 716' FEL (LATERAL No. 1 BOTTOM HOLE) SECTION 14,
798' FNL & 721' FEL (LATERAL No. 2 BOTTOM HOLE) SECTION 14,
T-32-N, R-7-W, N.M.P.M.
LA PLATA COUNTY, COLORADO
LATITUDE: 37.0238003° N
LONGITUDE: 107.5885303° W
NAD 83

FROM THE INTERSECTION OF COLORADO STATE HIGHWAY 172 AND
COLORADO STATE HIGHWAY 151 IN IGNACIO, COLORADO.

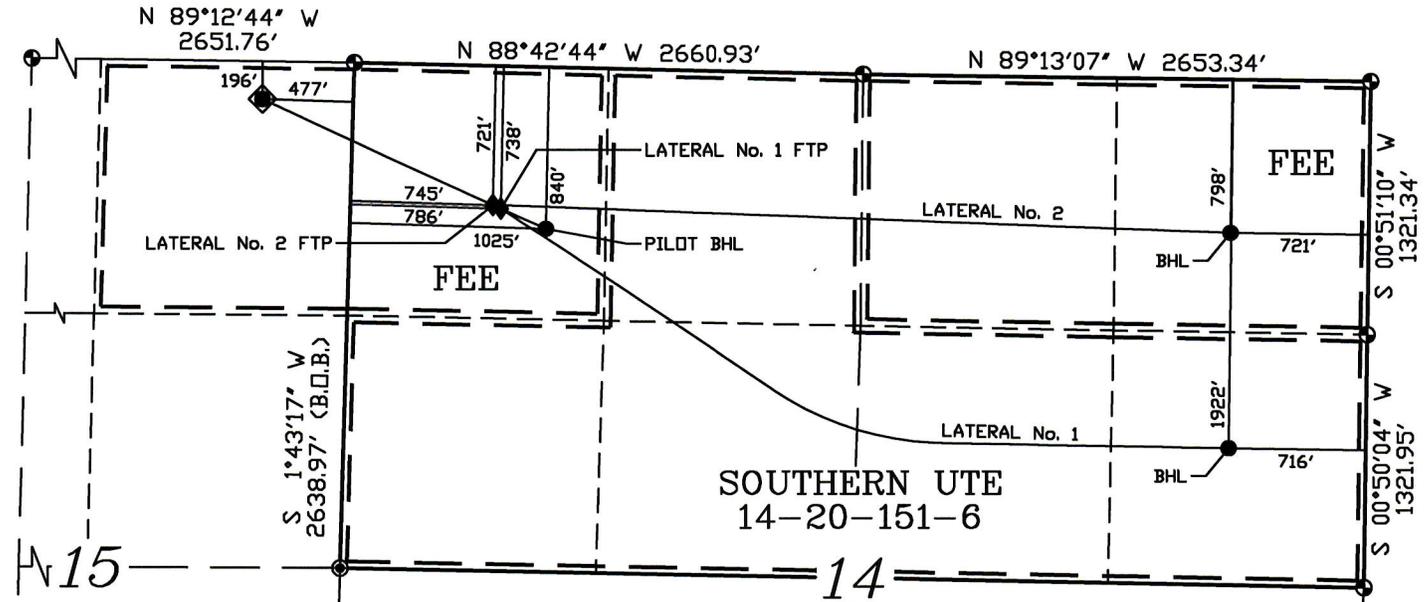
TRAVEL SOUTHEASTERLY 9.7 MILES ON COLORADO STATE HIGHWAY 151.
TURN RIGHT ONTO COUNTY ROAD 328 AND TRAVEL SOUTHERLY 0.5 MILE.
TURN RIGHT ONTO COUNTY ROAD 321 AND TRAVEL WESTERLY 0.5 MILE.
TURN LEFT ONTO COUNTY ROAD 326 AND TRAVEL SOUTHERLY 1.0 MILE.
TURN RIGHT ONTO COUNTY ROAD 327 AND TRAVEL WESTERLY 1.3 MILES.

TURN RIGHT AT TEE IN ROAD AND TRAVEL NORTHERLY
THEN WESTERLY 0.6 MILE.

TURN RIGHT AT "Y" IN ROAD AND TRAVEL WESTERLY 1.0 MILE,
CROSSING CATTLE GUARD.

TURN LEFT AT Y IN ROAD AND TRAVEL SOUTHWESTERLY 0.3 MILE TO
PROPOSED ACCESS ROAD AND PROPOSED SOUTHERN UTE 705H WELL LOCATION.

T. 32 N, R. 7 W



GEO. SURFACE VALUES

LATITUDE (NAD 83)
NORTH 37.0238003°
LONGITUDE (NAD 83)
WEST 107.5885303°

LATITUDE (NAD 27)
NORTH 37° 01.42778°
LONGITUDE (NAD 27)
WEST 107° 35.27520°

NORTHING (NAD 83)
1136857.35
EASTING (NAD 83)
2390295.10

GEO. PILOT BOTTOM HOLE VALUES

LATITUDE (NAD 83)
NORTH 37.0220430°
LONGITUDE (NAD 83)
WEST 107.5834042°

LATITUDE (NAD 27)
NORTH 37° 01.32233°
LONGITUDE (NAD 27)
WEST 107° 34.96764°

NORTHING
1136184.23
EASTING
2391777.06

SOUTHERN UTE 705H
GROUND ELEVATION:
6288.2'

NOTE:
DOWNHOLE INFORMATION TAKEN FROM STANDARD PLANNING REPORT PROVIDED BY HILCORP SAN JUAN, L.P. DATED 2/17/23

LATERAL No. 1 FIRST TAKE POINT (FTP) VALUES

LATITUDE (NAD 83)
NORTH 37.0223224°
LONGITUDE (NAD 83)
WEST 107.5842192°

LATITUDE (NAD 27)
NORTH 37° 01.33910°
LONGITUDE (NAD 27)
WEST 107° 35.01654°

NORTHING (NAD 83)
1136291.26
EASTING (NAD 83)
2391541.43

GEO. LATERAL No. 1 BOTTOM HOLE VALUES

LATITUDE (NAD 83)
NORTH 37.0191154°
LONGITUDE (NAD 83)
WEST 107.5710951°

LATITUDE (NAD 27)
NORTH 37° 01.14667°
LONGITUDE (NAD 27)
WEST 107° 34.22914°

NORTHING (NAD 83)
1135038.61
EASTING (NAD 83)
2395346.29

LATERAL No. 2 FIRST TAKE POINT (FTP) VALUES

LATITUDE (NAD 83)
NORTH 37.0223705°
LONGITUDE (NAD 83)
WEST 107.5843596°

LATITUDE (NAD 27)
NORTH 37° 01.34199°
LONGITUDE (NAD 27)
WEST 107° 35.02496°

NORTHING (NAD 83)
1136309.69
EASTING (NAD 83)
2391500.84

GEO. LATERAL No. 2 BOTTOM HOLE VALUES

LATITUDE (NAD 83)
NORTH 37.0222029°
LONGITUDE (NAD 83)
WEST 107.5711407°

LATITUDE (NAD 27)
NORTH 37° 01.33192°
LONGITUDE (NAD 27)
WEST 107° 34.23187°

NORTHING (NAD 83)
1136162.83
EASTING (NAD 83)
2395357.91

BASIS OF BEARING/DATUM

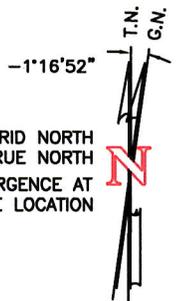
CO SP SOUTH (1983) - NAVD 88 ELEV., GPS OBSERVATIONS: MONUMENTED EAST LINE OF THE NE 1/4 OF SECTION 15, BASIS OF ELEVATION: AS MEASURED AT SET UP US ADJUSTED CONTROL POINT LOCATED IN THE SW 1/4 OF SECTION 4, ELEVATION: 6373.9'; T-32-N, R-7-W, N.M.P.M., LA PLATA COUNTY, COLORADO



NOTES

GPS OPERATOR JEFF BREWER OBSERVED A PDOP OF 2.1 ALL GPS OBSERVATIONS ARE IN COMPLIANCE WITH COGCC RULE NO. 215.

G.N.=GRID NORTH
T.N.=TRUE NORTH
CONVERGENCE AT SURFACE LOCATION



SCALE: 1" = 1000'

LEGEND

- ◆ SURFACE LOCATION (SHL)
- BOTTOM HOLE LOCATION (BHL)
- ◆ FIRST TAKE POINT (FTP)
- ⊙ ALUMINUM CAP - SUIR 1991
- ⊙ ALUMINUM CAP - SUIR 1992
- L DENOTES 90° TIE

SURVEYOR'S STATEMENT

I, John A. Vukonich, of Farmington, New Mexico, hereby state: This plat was made from notes taken during an actual survey by me or under my direct supervision on JANUARY 30, 2014 and it correctly shows the location of SOUTHERN UTE 705H.

COLORADO PLS No. 38275

DATE 06/12/23

HILCORP SAN JUAN, L.P.

PLAT OF DRILLING LOCATION FOR HILCORP SAN JUAN, L.P. SOUTHERN UTE 705H
SURFACE: 196' F/NL & 477' F/EL
PILOT BOTTOM HOLE: 840' F/NL & 1025' F/WL
LATERAL No. 1 BOTTOM HOLE: 1922' F/NL & 716' F/EL
LATERAL No. 2 BOTTOM HOLE: 798' F/NL & 721' F/EL
SECTION 14, T. 32 N, R. 7 W, N.M.P.M. LA PLATA COUNTY, COLORADO



P.O. BOX 3651
FARMINGTON, NM 87499
OFFICE: (505) 334-0408

BY: K.S. DWG No. 11736W05 DATE: 06/12/23

APD ID: 10400092029

Submission Date: 05/03/2023

Highlighted data reflects the most recent changes

Operator Name: HILCORP ENERGY COMPANY

Well Name: SOUTHERN UTE

Well Number: 705H

Well Type: COALBED NATURAL GAS WELL

Well Work Type: Drill

[Show Final Text](#)

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
12310114	OJO ALAMO	6295	2312	2472	SANDSTONE	USEABLE WATER	N
12310115	KIRTLAND	3845	2450	2669	SHALE	NONE	N
12310116	FRUITLAND	3761	2534	2799	COAL	COAL, NATURAL GAS, USEABLE WATER	Y
12310117	PICTURED CLIFFS	3313	2982	3729	SANDSTONE	NATURAL GAS	N

Section 2 - Blowout Prevention

Pressure Rating (PSI): 3M

Rating Depth: 5000

Equipment: Rotating head

Requesting Variance? NO

Variance request:

Testing Procedure: All required tests per regulations

Choke Diagram Attachment:

Pressure_Control_Equipment_20230503130213.pdf

BOP Diagram Attachment:

Pressure_Control_Equip_Writeup_20230503130223.pdf

Operator Name: HILCORP ENERGY COMPANY

Well Name: SOUTHERN UTE

Well Number: 705H

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	12.25	9.625	NEW	API	N	0	300	0	300	6288	5988	300	H-40	32.3	BUTT	18.1	15.8	DRY	37.7	DRY	26.2
2	INTERMEDIATE	8.75	7.0	NEW	API	N	0	3679	0	2962	6295	3326	3679	J-55	23	BUTT	4.1	2.9	DRY	4.6	DRY	3.9
3	LINER	6.25	4.5	NEW	API	N	3349	7214	2824	2850	3464	3438	3865	J-55	11.6	BUTT	1	1	DRY	2.2	DRY	1.9
4	LINER	6.25	4.5	NEW	API	N	3398	7546	2844	2870	3444	3418	4148	J-55	11.6	BUTT	1	1	DRY	2.2	DRY	1.9

Casing Attachments

Casing ID: 1 **String** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Program_20230503130310.pdf

Operator Name: HILCORP ENERGY COMPANY

Well Name: SOUTHERN UTE

Well Number: 705H

Casing Attachments

Casing ID: 2 **String** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing ID: 3 **String** LINER

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing ID: 4 **String** LINER

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Section 4 - Cement

Operator Name: HILCORP ENERGY COMPANY

Well Name: SOUTHERN UTE

Well Number: 705H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	300	151	1.25	15.2	188		Type III Cement	0.25% FL-52,0.25 pps celloflake

INTERMEDIATE	Lead		0	3679	337	2.13	12.1	717		Premium Lite	3% CaCl, 0.25 pps celloflake,5 ppm LCM-1, 0.4% FL-52, 8% bentonite
INTERMEDIATE	Tail		3179	3679	65	1.38	14.6	90		Type III Cement	1% CaCl, 0.25 pps celloflake, 0.2% FL-52
LINER	Lead		0	7214	0	0	0	0		Uncemented liner	N/A

LINER	Lead		0	7546	0	0	0	0		Uncemented liner	N/A
-------	------	--	---	------	---	---	---	---	--	------------------	-----

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? YES

Description of the equipment for the circulating system in accordance with Onshore Order #2: Air assist will be used if returns are lost with drilling fluids.

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Drilling_Fluids_20230503130843.pdf

Aerated_Fluid_Layout_20230417132942.jpg

Describe what will be on location to control well or mitigate other conditions: 400 bbls of 10 lb mud in addition to standard

Describe the mud monitoring system utilized: Parson PVT or Equivalent

Circulating Medium Table

Operator Name: HILCORP ENERGY COMPANY

Well Name: SOUTHERN UTE

Well Number: 705H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	300	SPUD MUD	8.3	9.2							
300	3679	LSND/GEL	8.4	9.5							
3349	7214	LSND/GEL	8.5	10.5							
3398	7546	LSND/GEL	8.5	10.5							

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

No production tests planned

List of open and cased hole logs run in the well:

MEASUREMENT WHILE DRILLING, MUD LOG/GEOLOGICAL LITHOLOGY LOG, GAMMA RAY LOG,

Coring operation description for the well:

No coring plans

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 900

Anticipated Surface Pressure: 248

Anticipated Bottom Hole Temperature(F): 140

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geohazards description:

Contingency Plans geohazards

Hydrogen Sulfide drilling operations plan required? NO

Hydrogen sulfide drilling operations

Operator Name: HILCORP ENERGY COMPANY

Well Name: SOUTHERN UTE

Well Number: 705H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Southern_Ute_705H_Lateral_No.1_WP2.1_Geographic_Rep_20230503131018.pdf
Southern_Ute_705H_Lateral_No.1_WP2.1_Plot_20230503131018.pdf
Southern_Ute_705H_Lateral_No.1_WP2.1_Standard_Plan_Rep_20230503131018.pdf
Southern_Ute_705H_Lateral_No.2_WP2.1_Anticollision_20230503131018.pdf
Southern_Ute_705H_Lateral_No.1_WP2.1_Anticollision_20230503131018.pdf
Southern_Ute_705H_Lateral_No.1_WP2.1_Spider_Plot_20230503131018.pdf
Southern_Ute_705H_Lateral_No.2_WP2.1_Standard_Plan_Rep_20230503131018.pdf
Southern_Ute_705H_Lateral_No.2_WP2.1_Spider_Plot_20230503131018.pdf
Southern_Ute_705H_Lateral_No.2_WP2.1_Geographic_Rep_20230503131018.pdf
Southern_Ute_705H_Lateral_No.2_WP2.1_Plot_20230503131018.pdf
Southern_Ute_705H_Pilot_WP2.1_Anticollision_20230503131018.pdf
Southern_Ute_705H_Pilot_WP2.1_Geographic_Rep_20230503131018.pdf
Southern_Ute_705H_Pilot_WP2.1_Plot_20230503131018.pdf
Southern_Ute_705H_Pilot_WP2.1_Standard_Plan_Rep_20230503131018.pdf
Southern_Ute_705H_Pilot_WP2.1_Spider_Plot_20230503131018.pdf
Revised_WBD_20230724152757.pdf

Other proposed operations facets description:

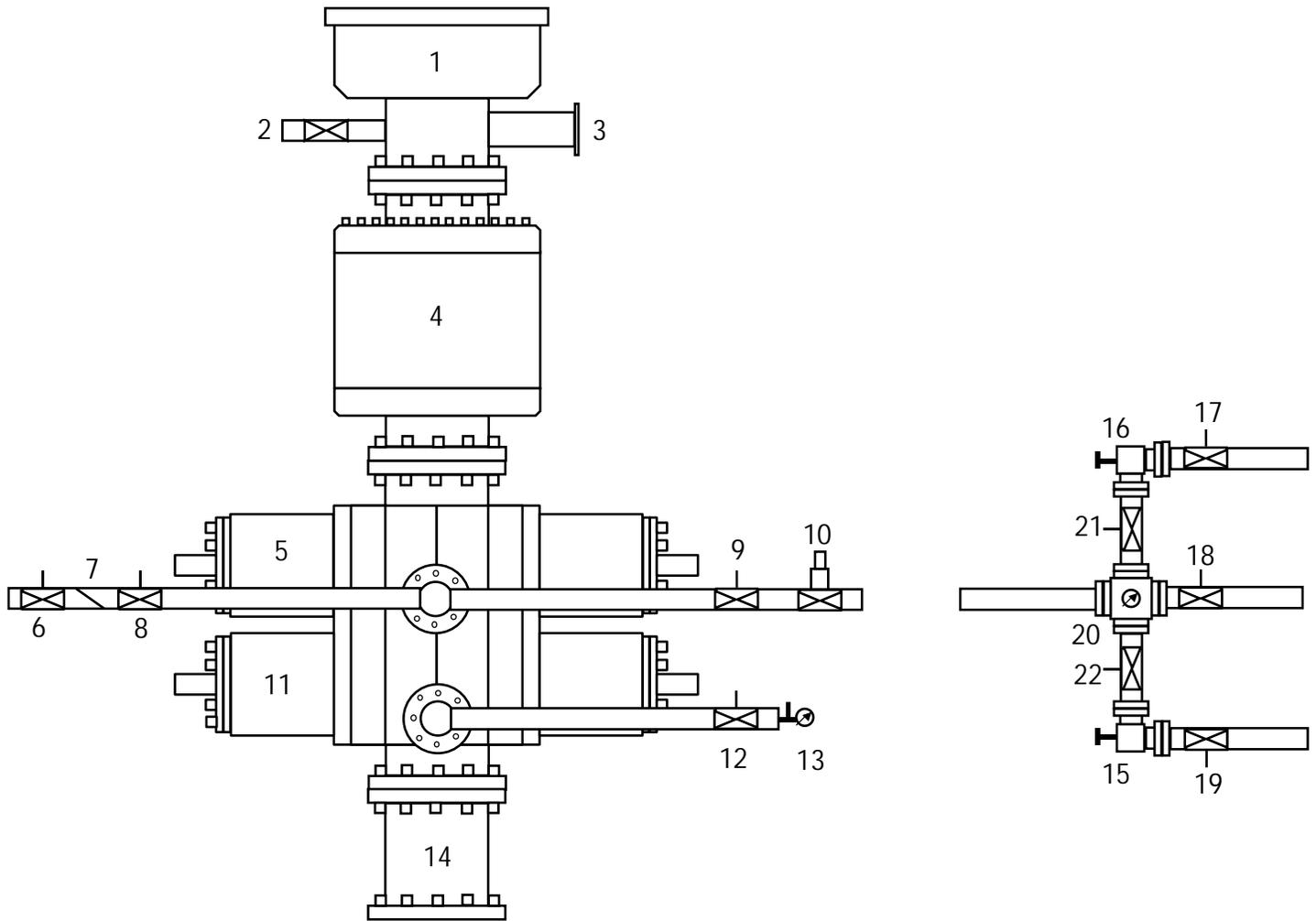
Other proposed operations facets attachment:

Cement_Program_20230503131034.pdf
Testing_Program_20230503131034.pdf

Other Variance attachment:

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

Technical Drilling Plan (Rev. 02)

Hilcorp Energy Company proposes to drill and complete the referenced dual lateral horizontal well targeting a coal seam in the Fruitland formation.

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

1. Location

Date:	February 28, 2023	Pool:	Fruitland Coal
Well Name:	Southern Ute 705H	Ground Elevation (ft. MSL):	6,295'
Surface Hole Location:	37.024° N, 107.588° W	County, State:	La Plata County, CO
Lateral #1 Depth (ft.)	7,546' MD / 2,870' TVD	Lat 1 Bottom Hole Location:	37.019° N, 107.570° W
Lateral #2 Depth (ft.)	7,214' MD / 2,850' TVD	Lat 2 Bottom Hole Location:	37.022° N, 107.571° W

Note: All depths in the directional drilling plan are referenced from an estimated RKB datum of 15' 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	2,312'	Water (fresh/useable)
Kirtland	2,450'	None
Fruitland	2,534'	Gas, Coal, Water
Pictured Cliffs	2,982'	None

3. Pressure Control Equipment

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

- BOP equipment will be nipped up on top of the wellhead after surface casing is set and cemented.
- Pressure control configurations will be designed to meet the minimum 2M standards.
- All equipment will have a minimum of 3M pressure rating and will be rated for 5,000' (TVD).
- A rotating head will be installed on top of the annular as seen in the attached diagram.

4. Casing & Cement Program

A. Proposed Casing Program:

Proposed Casing Design					
Casing String	Hole Size	Casing Size	Weight/Grade	Top Depth (MD/TVD)	Shoe Depth (MD/TVD)
Surface	12-1/4"	9-5/8"	32.3# H40 (or equiv.) STC	0'	300' / 300'
Intermediate	8-3/4"	7"	23# J55 (or equiv.) LTC	0'	3,679' / 2,962'
Lateral #1 Production Liner (pre-perforated)	6-1/4"	4-1/2"	11.6# J55 (or equiv.) LTC	3,398' / 2,844'	7,546' / 2,870'
Lateral #2 Production Liner (pre-perforated)	6-1/4"	4-1/2"	11.6# J55 (or equiv.) LTC	3,349' / 2,824'	7,214' / 2,850'
Proposed Casing Design Safety Factors					
Casing String	Casing Description	Burst Design SF	Collapse Design SF	Joint Tensile Design SF	Connection Tensile Design SF
Surface	9-5/8" 32.3# H40 STC	15.8	18.1	37.7	26.2
Intermediate	7" 23# J55 LTC	4.3	4.9	4.9	4.0
Lateral #1 Production Liner (pre-perforated)	4-1/2" 11.6# J55 LTC	N/A	N/A	2.1	1.9
Lateral #2 Production Liner (pre-perforated)	4-1/2" 11.6# J55 LTC	N/A	N/A	2.1	1.9

Notes:

- The production liners will be pre-perforated and dropped off in the open hole (uncemented). The top of the production liner will be approximately 5'-10' outside of the casing exit (no overlap between liner and 7" casing).
- 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.
- The 7" casing will be set across the setback boundary line and with the casing shoe within the drill block.

B. Proposed Centralizer Program:

Proposed Centralizer Program	
Interval	Centralizers & Placement
Surface	1 centralizer per joint on bottom 3 joints.
Intermediate	1 centralizer 10' above the shoe with lock collar. 1 centralizer every other joint on bottom 10 joints. 1 centralizer every 4 th joint to Ojo Alamo base. 1 Turbolizer at base of Ojo Alamo. 1 centralizer every joint to Ojo Alamo top. 1 Turbolizer placed midway through Ojo Alamo. 1 centralizer every 4 th joint from top of Ojo Alamo to surface shoe. 1 centralizer inside the surface casing.
Production	N/A

5. Drilling Fluids Program

A. Proposed Drilling Fluids Program:

Interval	Fluid Type	Density (ppg)	Fluid Loss (mL/30 min)	Max Chlorides (mg/L)	Depth (ft. MD)
Surface	Water/Gel	8.3 – 9.2	NC	1,000	0' – 300'
Intermediate	LSND / Gel System	8.4 – 9.5	6-16	1,000	300' – 3,679'
Production Lateral #1	LSND Brine (if needed)	8.5 – 10.5	4-14	1,000 400,000 (if CaCl added for density)	3,398' – 7,546'
Production Lateral #2	LSND Brine (if needed)	8.5 – 10.5	4-14	1,000 400,000 (if CaCl added for density)	3,349' – 7,214'

Notes:

- In the 6-1/4" production section, CaCl brine will only be utilized if a weighting agent is needed to increase mud weight (for either well control or wellbore stability).
- 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: 696 bbls (3,907 ft³).

6. Estimated Pressures & Drilling Hazards

A. Estimated Pressures

- Estimated Reservoir Pressure of Fruitland Coal: 600 – 900 psi
- Maximum Anticipated Surface Pressure: 700 psi
- No over-pressured intervals expected.
- There is production from the Fruitland Coal formation in offset wells in the area, which could result in these formations being under-pressured.

B. Water Flows

- Water flows are possible in the intermediate section. Water flows will be mitigated with increased mud weight.

C. Lost Circulation

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

D. Hydrogen Sulfide

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

Hilcorp Energy Company

**Farmington, NM
San Juan Basin
Southern Ute 705H**

Lateral No.1

Plan: WP2.1

Standard Planning Report - Geographic

17 February, 2023

Halliburton

Planning Report - Geographic

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Southern Ute 705H
Company:	Hilcorp Energy Company	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Project:	Farmington, NM	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site:	San Juan Basin	North Reference:	Grid
Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral No.1		
Design:	WP2.1		

Project Farmington, NM			
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		Using geodetic scale factor

Site San Juan Basin			
Site Position:		Northing:	2,186,723.60 usft
From:	Map	Easting:	570,736.10 usft
Position Uncertainty:	5.0 usft	Slot Radius:	13.200 in
		Latitude:	37.009
		Longitude:	-107.591

Well Southern Ute 705H			
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	2,192,025.35 usft
			Latitude:
			37.024
Position Uncertainty		1.0 usft	Easting:
			571,642.18 usft
			Longitude:
			-107.588
Grid Convergence:		0.15 °	Wellhead Elevation:
			usft
			Ground Level:
			6,295.0 usft

Wellbore Lateral No.1					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2022	2/8/2023	8.68	63.42	49,552.26589503

Design WP2.1				
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	3,350.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	108.37

Plan Survey Tool Program		Date	2/17/2023		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	3,350.0	7,545.7 WP2.1 (Lateral No.1)	3_MWD+HRGM	B001Mb: HRGM declination cc	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
3,350.0	65.00	113.00	2,823.1	-519.5	1,223.9	0.00	0.00	0.00	0.00	
3,393.0	66.29	122.00	2,840.8	-534.8	1,260.0	3.00	3.00	0.00	0.00	
3,640.6	90.30	122.18	2,890.6	-662.7	1,463.8	9.70	9.70	0.07	0.44	
5,117.3	90.30	122.18	2,882.9	-1,449.1	2,713.7	0.00	0.00	0.00	0.00	
6,045.8	90.30	89.68	2,877.9	-1,700.6	3,594.7	3.50	0.00	-3.50	-89.92	
7,545.8	90.30	89.68	2,870.0	-1,692.2	5,094.6	0.00	0.00	0.00	0.00	TD (705H Lat.No.1)

Halliburton

Planning Report - Geographic

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Southern Ute 705H
Company:	Hilcorp Energy Company	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Project:	Farmington, NM	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site:	San Juan Basin	North Reference:	Grid
Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral No.1		
Design:	WP2.1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.0	0.00	0.00	0.0	0.0	0.0	2,192,025.35	571,642.18	37.024	-107.588	
100.0	0.00	0.00	100.0	0.0	0.0	2,192,025.35	571,642.18	37.024	-107.588	
200.0	0.00	0.00	200.0	0.0	0.0	2,192,025.35	571,642.18	37.024	-107.588	
300.0	0.00	0.00	300.0	0.0	0.0	2,192,025.35	571,642.18	37.024	-107.588	
400.0	0.00	0.00	400.0	0.0	0.0	2,192,025.35	571,642.18	37.024	-107.588	
500.0	0.00	0.00	500.0	0.0	0.0	2,192,025.35	571,642.18	37.024	-107.588	
600.0	0.00	0.00	600.0	0.0	0.0	2,192,025.35	571,642.18	37.024	-107.588	
700.0	0.00	0.00	700.0	0.0	0.0	2,192,025.35	571,642.18	37.024	-107.588	
743.0	0.00	0.00	743.0	0.0	0.0	2,192,025.35	571,642.18	37.024	-107.588	
800.0	1.43	113.00	800.0	-0.3	0.7	2,192,025.07	571,642.84	37.024	-107.588	
900.0	3.93	113.00	899.9	-2.1	4.9	2,192,023.25	571,647.13	37.024	-107.588	
1,000.0	6.43	113.00	999.5	-5.6	13.3	2,192,019.73	571,655.43	37.024	-107.588	
1,100.0	8.93	113.00	1,098.6	-10.8	25.5	2,192,014.51	571,667.72	37.024	-107.588	
1,200.0	11.43	113.00	1,197.0	-17.7	41.8	2,192,007.61	571,683.98	37.024	-107.588	
1,300.0	13.93	113.00	1,294.5	-26.3	62.0	2,191,999.03	571,704.18	37.024	-107.588	
1,400.0	16.43	113.00	1,391.0	-36.5	86.1	2,191,988.81	571,728.27	37.024	-107.588	
1,500.0	18.93	113.00	1,486.3	-48.4	114.0	2,191,976.95	571,756.21	37.024	-107.588	
1,600.0	21.43	113.00	1,580.2	-61.9	145.8	2,191,963.47	571,787.96	37.024	-107.587	
1,700.0	23.93	113.00	1,672.4	-76.9	181.3	2,191,948.41	571,823.44	37.024	-107.587	
1,800.0	26.43	113.00	1,762.9	-93.6	220.4	2,191,931.79	571,862.59	37.024	-107.587	
1,900.0	28.93	113.00	1,851.5	-111.7	263.2	2,191,913.65	571,905.33	37.023	-107.587	
2,000.0	31.43	113.00	1,937.9	-131.3	309.4	2,191,894.01	571,951.59	37.023	-107.587	
2,100.0	33.93	113.00	2,022.1	-152.4	359.1	2,191,872.92	572,001.28	37.023	-107.587	
2,200.0	36.43	113.00	2,103.8	-174.9	412.2	2,191,850.41	572,054.30	37.023	-107.587	
2,300.0	38.93	113.00	2,183.0	-198.8	468.4	2,191,826.54	572,110.55	37.023	-107.586	
2,400.0	41.43	113.00	2,259.4	-224.0	527.8	2,191,801.33	572,169.93	37.023	-107.586	
2,500.0	43.93	113.00	2,332.9	-250.5	590.2	2,191,774.85	572,232.31	37.023	-107.586	
2,600.0	46.43	113.00	2,403.4	-278.2	655.5	2,191,747.14	572,297.59	37.023	-107.586	
2,700.0	48.93	113.00	2,470.7	-307.1	723.5	2,191,718.26	572,365.64	37.023	-107.585	
2,800.0	51.43	113.00	2,534.7	-337.1	794.2	2,191,688.26	572,436.32	37.023	-107.585	
2,900.0	53.93	113.00	2,595.4	-368.2	867.4	2,191,657.19	572,509.51	37.023	-107.585	
3,000.0	56.43	113.00	2,652.5	-400.3	943.0	2,191,625.12	572,585.06	37.023	-107.585	
3,100.0	58.93	113.00	2,705.9	-433.3	1,020.7	2,191,592.11	572,662.83	37.023	-107.584	
3,200.0	61.43	113.00	2,755.7	-467.2	1,100.6	2,191,558.22	572,742.68	37.023	-107.584	
3,300.0	63.93	113.00	2,801.6	-501.9	1,182.4	2,191,523.51	572,824.45	37.022	-107.584	
3,343.0	65.00	113.00	2,820.1	-517.0	1,218.1	2,191,508.35	572,860.16	37.022	-107.584	
3,350.0	65.00	113.00	2,823.1	-519.5	1,223.9	2,191,505.87	572,866.00	37.022	-107.584	
3,393.0	66.29	122.00	2,840.8	-534.8	1,260.0	2,191,490.57	572,902.05	37.022	-107.584	
3,400.0	66.97	122.01	2,843.6	-538.2	1,265.4	2,191,487.16	572,907.50	37.022	-107.584	
3,450.0	71.82	122.04	2,861.2	-563.0	1,305.1	2,191,462.35	572,947.16	37.022	-107.583	
3,500.0	76.67	122.08	2,874.7	-588.6	1,345.9	2,191,436.82	572,987.93	37.022	-107.583	
3,550.0	81.52	122.12	2,884.2	-614.7	1,387.4	2,191,410.74	573,029.51	37.022	-107.583	
3,600.0	86.37	122.15	2,889.5	-641.1	1,429.5	2,191,384.30	573,071.59	37.022	-107.583	
3,640.6	90.30	122.18	2,890.6	-662.7	1,463.8	2,191,362.73	573,105.90	37.022	-107.583	
3,700.0	90.30	122.18	2,890.3	-694.3	1,514.1	2,191,331.07	573,156.21	37.022	-107.583	
3,800.0	90.30	122.18	2,889.8	-747.6	1,598.8	2,191,277.82	573,240.84	37.022	-107.582	
3,900.0	90.30	122.18	2,889.3	-800.8	1,683.4	2,191,224.57	573,325.47	37.022	-107.582	
4,000.0	90.30	122.18	2,888.8	-854.1	1,768.1	2,191,171.32	573,410.10	37.021	-107.582	
4,100.0	90.30	122.18	2,888.2	-907.4	1,852.7	2,191,118.06	573,494.73	37.021	-107.582	
4,200.0	90.30	122.18	2,887.7	-960.6	1,937.3	2,191,064.81	573,579.37	37.021	-107.581	
4,300.0	90.30	122.18	2,887.2	-1,013.9	2,022.0	2,191,011.56	573,664.00	37.021	-107.581	
4,400.0	90.30	122.18	2,886.6	-1,067.1	2,106.6	2,190,958.31	573,748.63	37.021	-107.581	
4,500.0	90.30	122.18	2,886.1	-1,120.4	2,191.2	2,190,905.06	573,833.26	37.021	-107.580	
4,600.0	90.30	122.18	2,885.6	-1,173.6	2,275.9	2,190,851.81	573,917.89	37.021	-107.580	
4,700.0	90.30	122.18	2,885.1	-1,226.9	2,360.5	2,190,798.56	574,002.52	37.020	-107.580	

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Planning Report - Geographic

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Southern Ute 705H
Company:	Hilcorp Energy Company	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Project:	Farmington, NM	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site:	San Juan Basin	North Reference:	Grid
Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral No.1		
Design:	WP2.1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
4,800.0	90.30	122.18	2,884.5	-1,280.1	2,445.2	2,190,745.30	574,087.15	37.020	-107.580	
4,900.0	90.30	122.18	2,884.0	-1,333.4	2,529.8	2,190,692.05	574,171.79	37.020	-107.579	
5,000.0	90.30	122.18	2,883.5	-1,386.7	2,614.4	2,190,638.80	574,256.42	37.020	-107.579	
5,100.0	90.30	122.18	2,883.0	-1,439.9	2,699.1	2,190,585.55	574,341.05	37.020	-107.579	
5,117.3	90.30	122.18	2,882.9	-1,449.1	2,713.7	2,190,576.33	574,355.70	37.020	-107.579	
5,200.0	90.31	119.28	2,882.4	-1,491.4	2,784.8	2,190,534.08	574,426.76	37.020	-107.578	
5,300.0	90.31	115.78	2,881.9	-1,537.6	2,873.5	2,190,487.87	574,515.41	37.020	-107.578	
5,400.0	90.31	112.28	2,881.3	-1,578.3	2,964.8	2,190,447.15	574,606.72	37.019	-107.578	
5,500.0	90.31	108.78	2,880.8	-1,613.4	3,058.4	2,190,412.08	574,700.34	37.019	-107.577	
5,600.0	90.31	105.28	2,880.3	-1,642.7	3,154.0	2,190,382.79	574,795.93	37.019	-107.577	
5,700.0	90.31	101.78	2,879.7	-1,666.1	3,251.2	2,190,359.40	574,893.13	37.019	-107.577	
5,800.0	90.31	98.28	2,879.2	-1,683.5	3,349.7	2,190,341.98	574,991.58	37.019	-107.576	
5,900.0	90.31	94.78	2,878.6	-1,694.9	3,449.0	2,190,330.60	575,090.90	37.019	-107.576	
6,000.0	90.30	91.28	2,878.1	-1,700.2	3,548.8	2,190,325.31	575,190.74	37.019	-107.576	
6,045.8	90.30	89.68	2,877.9	-1,700.6	3,594.7	2,190,324.92	575,236.56	37.019	-107.576	
6,100.0	90.30	89.68	2,877.6	-1,700.3	3,648.8	2,190,325.22	575,290.72	37.019	-107.575	
6,200.0	90.30	89.68	2,877.0	-1,699.7	3,748.8	2,190,325.78	575,390.71	37.019	-107.575	
6,300.0	90.30	89.68	2,876.5	-1,699.1	3,848.8	2,190,326.34	575,490.70	37.019	-107.575	
6,400.0	90.30	89.68	2,876.0	-1,698.6	3,948.8	2,190,326.90	575,590.69	37.019	-107.574	
6,500.0	90.30	89.68	2,875.5	-1,698.0	4,048.8	2,190,327.46	575,690.68	37.019	-107.574	
6,600.0	90.30	89.68	2,875.0	-1,697.5	4,148.8	2,190,328.02	575,790.67	37.019	-107.574	
6,700.0	90.30	89.68	2,874.4	-1,696.9	4,248.8	2,190,328.58	575,890.66	37.019	-107.573	
6,800.0	90.30	89.68	2,873.9	-1,696.3	4,348.8	2,190,329.13	575,990.65	37.019	-107.573	
6,900.0	90.30	89.68	2,873.4	-1,695.8	4,448.8	2,190,329.69	576,090.64	37.019	-107.573	
7,000.0	90.30	89.68	2,872.9	-1,695.2	4,548.8	2,190,330.25	576,190.63	37.019	-107.572	
7,100.0	90.30	89.68	2,872.3	-1,694.7	4,648.8	2,190,330.81	576,290.62	37.019	-107.572	
7,200.0	90.30	89.68	2,871.8	-1,694.1	4,748.8	2,190,331.37	576,390.61	37.019	-107.572	
7,300.0	90.30	89.68	2,871.3	-1,693.6	4,848.8	2,190,331.93	576,490.60	37.019	-107.571	
7,400.0	90.30	89.68	2,870.8	-1,693.0	4,948.8	2,190,332.48	576,590.59	37.019	-107.571	
7,500.0	90.30	89.68	2,870.2	-1,692.4	5,048.8	2,190,333.04	576,690.58	37.019	-107.571	
7,545.8	90.30	89.68	2,870.0	-1,692.2	5,094.6	2,190,333.30	576,736.40	37.019	-107.570	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
TD (705H Lat.No.1) - plan hits target center - Point	0.00	0.00	2,870.0	-1,692.2	5,094.6	2,190,333.30	576,736.40	37.019	-107.570	
Potential Pt.2 (705H Lat. - plan misses target center by 60.0usft at 5609.8usft MD (2880.2 TVD, -1645.2 N, 3163.5 E) - Point	0.00	0.01	2,887.0	-1,703.2	3,149.6	2,190,322.30	574,791.50	37.019	-107.577	
Potential Pt.1 (705H Lat. - plan misses target center by 7.8usft at 4122.8usft MD (2888.1 TVD, -919.5 N, 1872.0 E) - Point	0.00	0.00	2,891.0	-925.6	1,868.2	2,191,099.80	573,510.20	37.021	-107.582	

Halliburton

Planning Report - Geographic

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Southern Ute 705H
Company:	Hilcorp Energy Company	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Project:	Farmington, NM	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site:	San Juan Basin	North Reference:	Grid
Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral No.1		
Design:	WP2.1		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
3,350.0	2,823.1	-519.5	1,223.9	Tie On @ 3350' MD	
3,393.0	2,840.8	-534.8	1,260.0	BOW @ 3393' MD	
3,640.6	2,890.6	-662.7	1,463.9	EOB & SOH @ 3640.6' MD, 90.3° INC	
5,117.3	2,882.9	-1,449.1	2,713.7	EOH & SOT @ 5117.3' MD, 3.5°/100' DLS	
6,045.8	2,877.9	-1,700.6	3,594.6	EOT & SOH @ 6045.8' MD	
7,545.8	2,870.0	-1,692.2	5,094.6	PBHL @ 7545.8' MD	

Project: Farmington, NM
 Site: San Juan Basin
 Well: Southern Ute 705H
 Wellbore: Lateral No.1
 Design: WP2.1

17:42, February 17 2023

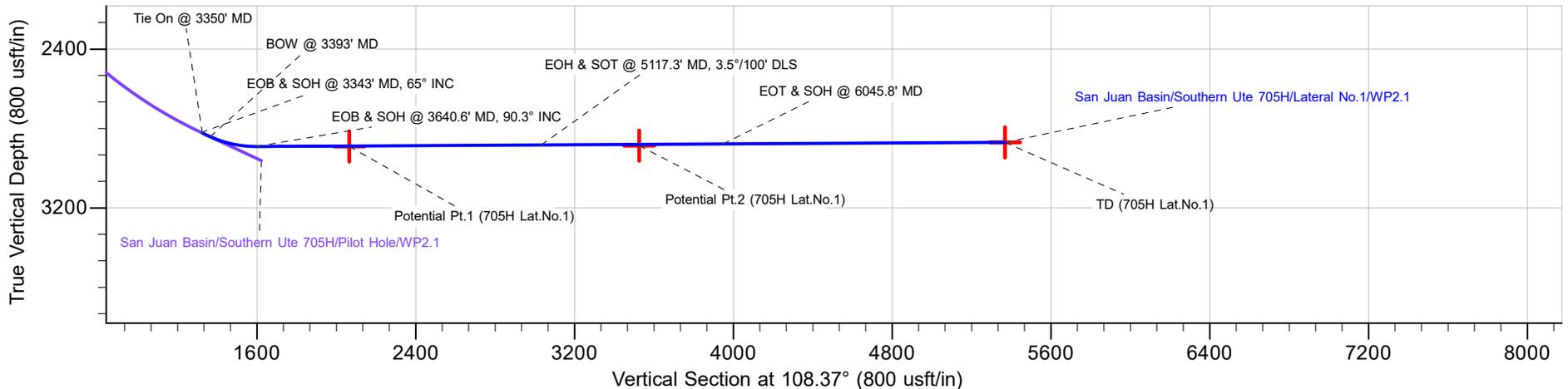
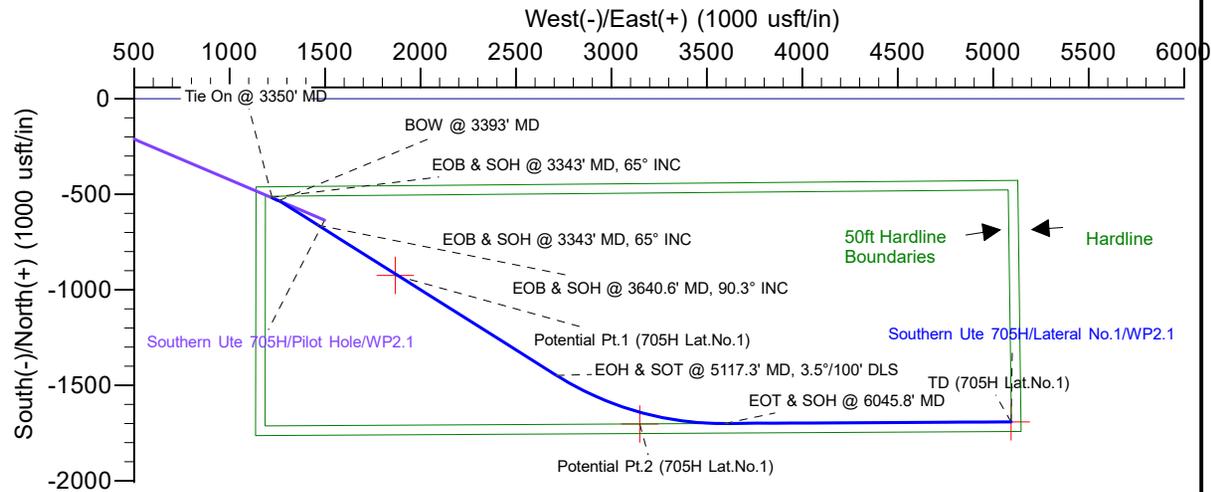
PROJECT DETAILS: Farmington, NM	
Geodetic System: US State Plane 1927 (Exact solution)	
Datum: NAD 1927 (NADCON CONUS)	
Ellipsoid: Clarke 1866	
Zone: New Mexico West 3003	
System Datum: Mean Sea Level	

WP2.1										
Surface Location:										
		Northing	Easting		Latitude	Longitude				
		2192025.35	571642.18		37.024	-107.588				
		Reference Elev'n:		RKB to MSL= 6310 @ 6310.0usft		6295.0				
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Annotation
1	3350.0	65.00	113.00	2823.1	-519.5	1223.9	0.0	0.0	1325.3	Tie On @ 3350' MD
2	3393.0	66.29	122.00	2840.8	-534.8	1260.0	3.00	0.00	1364.3	BOW @ 3393' MD
3	3640.6	90.30	122.18	2890.6	-662.7	1463.8	9.70	0.44	1598.1	EOB & SOH @ 3640.6' MD, 90.3° INC
4	5117.3	90.30	122.18	2882.9	-1449.1	2713.7	0.00	0.00	3032.2	EOH & SOT @ 5117.3' MD, 3.5°/100' DLS
5	6045.8	90.30	89.68	2877.9	-1700.6	3594.7	3.50	-89.92	3947.4	EOT & SOH @ 6045.8' MD
6	7545.8	90.30	89.68	2870.0	-1692.2	5094.6	0.00	0.00	5368.3	PBHL @ 7545.8' MD



Reference is Grid North

BHL DETAILS	
MD:	7545.8ft
TVD:	2870.0ft
N/S:	-1692.2ft
E/W:	5094.6ft
Northing:	2190333.30ft
Easting:	576736.40ft
Latitude:	37.019
Longitude:	-107.570



Hilcorp Energy Company

Farmington, NM

San Juan Basin

Southern Ute 705H

Lateral No.1

Plan: WP2.1

Standard Planning Report

17 February, 2023

Halliburton

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Southern Ute 705H
Company:	Hilcorp Energy Company	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Project:	Farmington, NM	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site:	San Juan Basin	North Reference:	Grid
Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral No.1		
Design:	WP2.1		

Project	Farmington, NM		
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		Using geodetic scale factor

Site	San Juan Basin				
Site Position:		Northing:	2,186,723.60 usft	Latitude:	37.009
From:	Map	Easting:	570,736.10 usft	Longitude:	-107.591
Position Uncertainty:	5.0 usft	Slot Radius:	13.200 in		

Well	Southern Ute 705H					
Well Position	+N/-S	0.0 usft	Northing:	2,192,025.35 usft	Latitude:	37.024
	+E/-W	0.0 usft	Easting:	571,642.18 usft	Longitude:	-107.588
Position Uncertainty		1.0 usft	Wellhead Elevation:	usft	Ground Level:	6,295.0 usft
Grid Convergence:		0.15 °				

Wellbore	Lateral No.1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2022	2/8/2023	8.68	63.42	49,552.26589503

Design	WP2.1				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	3,350.0	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	108.37	

Plan Survey Tool Program	Date	2/17/2023			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	3,350.0	7,545.7 WP2.1 (Lateral No.1)	3_MWD+HRGM	B001Mb: HRGM declination co	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
3,350.0	65.00	113.00	2,823.1	-519.5	1,223.9	0.00	0.00	0.00	0.00	
3,393.0	66.29	122.00	2,840.8	-534.8	1,260.0	3.00	3.00	0.00	0.00	
3,640.6	90.30	122.18	2,890.6	-662.7	1,463.8	9.70	9.70	0.07	0.44	
5,117.3	90.30	122.18	2,882.9	-1,449.1	2,713.7	0.00	0.00	0.00	0.00	
6,045.8	90.30	89.68	2,877.9	-1,700.6	3,594.7	3.50	0.00	-3.50	-89.92	
7,545.8	90.30	89.68	2,870.0	-1,692.2	5,094.6	0.00	0.00	0.00	0.00	TD (705H Lat.No.1)

Halliburton

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Southern Ute 705H
Company:	Hilcorp Energy Company	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Project:	Farmington, NM	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site:	San Juan Basin	North Reference:	Grid
Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral No.1		
Design:	WP2.1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
743.0	0.00	0.00	743.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	1.43	113.00	800.0	-0.3	0.7	0.7	2.50	2.50	0.00
900.0	3.93	113.00	899.9	-2.1	4.9	5.4	2.50	2.50	0.00
1,000.0	6.43	113.00	999.5	-5.6	13.3	14.3	2.50	2.50	0.00
1,100.0	8.93	113.00	1,098.6	-10.8	25.5	27.7	2.50	2.50	0.00
1,200.0	11.43	113.00	1,197.0	-17.7	41.8	45.3	2.50	2.50	0.00
1,300.0	13.93	113.00	1,294.5	-26.3	62.0	67.1	2.50	2.50	0.00
1,400.0	16.43	113.00	1,391.0	-36.5	86.1	93.2	2.50	2.50	0.00
1,500.0	18.93	113.00	1,486.3	-48.4	114.0	123.5	2.50	2.50	0.00
1,600.0	21.43	113.00	1,580.2	-61.9	145.8	157.9	2.50	2.50	0.00
1,700.0	23.93	113.00	1,672.4	-76.9	181.3	196.3	2.50	2.50	0.00
1,800.0	26.43	113.00	1,762.9	-93.6	220.4	238.7	2.50	2.50	0.00
1,900.0	28.93	113.00	1,851.5	-111.7	263.2	285.0	2.50	2.50	0.00
2,000.0	31.43	113.00	1,937.9	-131.3	309.4	335.1	2.50	2.50	0.00
2,100.0	33.93	113.00	2,022.1	-152.4	359.1	388.9	2.50	2.50	0.00
2,200.0	36.43	113.00	2,103.8	-174.9	412.2	446.3	2.50	2.50	0.00
2,300.0	38.93	113.00	2,183.0	-198.8	468.4	507.2	2.50	2.50	0.00
2,400.0	41.43	113.00	2,259.4	-224.0	527.8	571.5	2.50	2.50	0.00
2,500.0	43.93	113.00	2,332.9	-250.5	590.2	639.1	2.50	2.50	0.00
2,600.0	46.43	113.00	2,403.4	-278.2	655.5	709.7	2.50	2.50	0.00
2,700.0	48.93	113.00	2,470.7	-307.1	723.5	783.4	2.50	2.50	0.00
2,800.0	51.43	113.00	2,534.7	-337.1	794.2	860.0	2.50	2.50	0.00
2,900.0	53.93	113.00	2,595.4	-368.2	867.4	939.2	2.50	2.50	0.00
3,000.0	56.43	113.00	2,652.5	-400.3	943.0	1,021.0	2.50	2.50	0.00
3,100.0	58.93	113.00	2,705.9	-433.3	1,020.7	1,105.3	2.50	2.50	0.00
3,200.0	61.43	113.00	2,755.7	-467.2	1,100.6	1,191.7	2.50	2.50	0.00
3,300.0	63.93	113.00	2,801.6	-501.9	1,182.4	1,280.3	2.50	2.50	0.00
3,343.0	65.00	113.00	2,820.1	-517.0	1,218.1	1,319.0	2.50	2.50	0.00
3,350.0	65.00	113.00	2,823.1	-519.5	1,223.9	1,325.3	0.00	0.00	0.00
3,393.0	66.29	122.00	2,840.8	-534.8	1,260.0	1,364.3	19.30	3.00	20.93
3,400.0	66.97	122.01	2,843.6	-538.2	1,265.4	1,370.6	9.70	9.70	0.08
3,450.0	71.82	122.04	2,861.2	-563.0	1,305.1	1,416.0	9.70	9.70	0.08
3,500.0	76.67	122.08	2,874.7	-588.6	1,345.9	1,462.8	9.70	9.70	0.07
3,550.0	81.52	122.12	2,884.2	-614.7	1,387.4	1,510.5	9.70	9.70	0.07
3,600.0	86.37	122.15	2,889.5	-641.1	1,429.5	1,558.7	9.70	9.70	0.07
3,640.6	90.30	122.18	2,890.6	-662.7	1,463.8	1,598.1	9.70	9.70	0.07
3,700.0	90.30	122.18	2,890.3	-694.3	1,514.1	1,655.8	0.00	0.00	0.00
3,800.0	90.30	122.18	2,889.8	-747.6	1,598.8	1,752.9	0.00	0.00	0.00
3,900.0	90.30	122.18	2,889.3	-800.8	1,683.4	1,850.0	0.00	0.00	0.00
4,000.0	90.30	122.18	2,888.8	-854.1	1,768.1	1,947.1	0.00	0.00	0.00
4,100.0	90.30	122.18	2,888.2	-907.4	1,852.7	2,044.3	0.00	0.00	0.00
4,200.0	90.30	122.18	2,887.7	-960.6	1,937.3	2,141.4	0.00	0.00	0.00
4,300.0	90.30	122.18	2,887.2	-1,013.9	2,022.0	2,238.5	0.00	0.00	0.00
4,400.0	90.30	122.18	2,886.6	-1,067.1	2,106.6	2,335.6	0.00	0.00	0.00
4,500.0	90.30	122.18	2,886.1	-1,120.4	2,191.2	2,432.7	0.00	0.00	0.00
4,600.0	90.30	122.18	2,885.6	-1,173.6	2,275.9	2,529.8	0.00	0.00	0.00

Halliburton

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Southern Ute 705H
Company:	Hilcorp Energy Company	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Project:	Farmington, NM	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site:	San Juan Basin	North Reference:	Grid
Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral No.1		
Design:	WP2.1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
4,700.0	90.30	122.18	2,885.1	-1,226.9	2,360.5	2,626.9	0.00	0.00	0.00	
4,800.0	90.30	122.18	2,884.5	-1,280.1	2,445.2	2,724.0	0.00	0.00	0.00	
4,900.0	90.30	122.18	2,884.0	-1,333.4	2,529.8	2,821.1	0.00	0.00	0.00	
5,000.0	90.30	122.18	2,883.5	-1,386.7	2,614.4	2,918.2	0.00	0.00	0.00	
5,100.0	90.30	122.18	2,883.0	-1,439.9	2,699.1	3,015.4	0.00	0.00	0.00	
5,117.3	90.30	122.18	2,882.9	-1,449.1	2,713.7	3,032.2	0.00	0.00	0.00	
5,200.0	90.31	119.28	2,882.4	-1,491.4	2,784.8	3,112.9	3.50	0.00	-3.50	
5,300.0	90.31	115.78	2,881.9	-1,537.6	2,873.5	3,211.6	3.50	0.00	-3.50	
5,400.0	90.31	112.28	2,881.3	-1,578.3	2,964.8	3,311.1	3.50	0.00	-3.50	
5,500.0	90.31	108.78	2,880.8	-1,613.4	3,058.4	3,411.0	3.50	0.00	-3.50	
5,600.0	90.31	105.28	2,880.3	-1,642.7	3,154.0	3,511.0	3.50	0.00	-3.50	
5,700.0	90.31	101.78	2,879.7	-1,666.1	3,251.2	3,610.6	3.50	0.00	-3.50	
5,800.0	90.31	98.28	2,879.2	-1,683.5	3,349.7	3,709.6	3.50	0.00	-3.50	
5,900.0	90.31	94.78	2,878.6	-1,694.9	3,449.0	3,807.4	3.50	0.00	-3.50	
6,000.0	90.30	91.28	2,878.1	-1,700.2	3,548.8	3,903.8	3.50	0.00	-3.50	
6,045.8	90.30	89.68	2,877.9	-1,700.6	3,594.7	3,947.4	3.50	-0.01	-3.50	
6,100.0	90.30	89.68	2,877.6	-1,700.3	3,648.8	3,998.8	0.00	0.00	0.00	
6,200.0	90.30	89.68	2,877.0	-1,699.7	3,748.8	4,093.5	0.00	0.00	0.00	
6,300.0	90.30	89.68	2,876.5	-1,699.1	3,848.8	4,188.2	0.00	0.00	0.00	
6,400.0	90.30	89.68	2,876.0	-1,698.6	3,948.8	4,282.9	0.00	0.00	0.00	
6,500.0	90.30	89.68	2,875.5	-1,698.0	4,048.8	4,377.6	0.00	0.00	0.00	
6,600.0	90.30	89.68	2,875.0	-1,697.5	4,148.8	4,472.4	0.00	0.00	0.00	
6,700.0	90.30	89.68	2,874.4	-1,696.9	4,248.8	4,567.1	0.00	0.00	0.00	
6,800.0	90.30	89.68	2,873.9	-1,696.3	4,348.8	4,661.8	0.00	0.00	0.00	
6,900.0	90.30	89.68	2,873.4	-1,695.8	4,448.8	4,756.5	0.00	0.00	0.00	
7,000.0	90.30	89.68	2,872.9	-1,695.2	4,548.8	4,851.3	0.00	0.00	0.00	
7,100.0	90.30	89.68	2,872.3	-1,694.7	4,648.8	4,946.0	0.00	0.00	0.00	
7,200.0	90.30	89.68	2,871.8	-1,694.1	4,748.8	5,040.7	0.00	0.00	0.00	
7,300.0	90.30	89.68	2,871.3	-1,693.6	4,848.8	5,135.4	0.00	0.00	0.00	
7,400.0	90.30	89.68	2,870.8	-1,693.0	4,948.8	5,230.2	0.00	0.00	0.00	
7,500.0	90.30	89.68	2,870.2	-1,692.4	5,048.8	5,324.9	0.00	0.00	0.00	
7,545.8	90.30	89.68	2,870.0	-1,692.2	5,094.6	5,368.3	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
TD (705H Lat.No.1) - hit/miss target - Shape - Point	0.00	0.00	2,870.0	-1,692.2	5,094.6	2,190,333.30	576,736.40	37.019	-107.570	
Potential Pt.2 (705H Lat. - plan misses target center by 60.0usft at 5609.8usft MD (2880.2 TVD, -1645.2 N, 3163.5 E) - Point	0.00	0.01	2,887.0	-1,703.2	3,149.6	2,190,322.30	574,791.50	37.019	-107.577	
Potential Pt.1 (705H Lat. - plan misses target center by 7.8usft at 4122.8usft MD (2888.1 TVD, -919.5 N, 1872.0 E) - Point	0.00	0.00	2,891.0	-925.6	1,868.2	2,191,099.80	573,510.20	37.021	-107.582	

Halliburton

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Southern Ute 705H
Company:	Hilcorp Energy Company	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Project:	Farmington, NM	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site:	San Juan Basin	North Reference:	Grid
Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral No.1		
Design:	WP2.1		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
3,350.0	2,823.1	-519.5	1,223.9	Tie On @ 3350' MD
3,393.0	2,840.8	-534.8	1,260.0	BOW @ 3393' MD
3,640.6	2,890.6	-662.7	1,463.9	EOB & SOH @ 3640.6' MD, 90.3° INC
5,117.3	2,882.9	-1,449.1	2,713.7	EOH & SOT @ 5117.3' MD, 3.5°/100' DLS
6,045.8	2,877.9	-1,700.6	3,594.6	EOT & SOH @ 6045.8' MD
7,545.8	2,870.0	-1,692.2	5,094.6	PBHL @ 7545.8' MD

Hilcorp Energy Company

**Farmington, NM
San Juan Basin
Southern Ute 705H**

**Lateral No.2
WP2.1**

Anticollision Report

15 March, 2023

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Reference	WP2.1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 25.0usft	Error Model:	ISCWSA
Depth Range:	3,300.0 to 7,214.0usft	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 10,000.0usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Through Borehole Radius

Survey Tool Program		Date	3/14/2023	
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	3,300.0	WP2.1 (Pilot Hole)	3_MWD+HRGM	B001Mb: HRGM declination correction only
3,300.0	7,213.3	WP2.1 (Lateral No.2)	3_MWD+HRGM	B001Mb: HRGM declination correction only

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
San Juan Basin						
SOUTHERN UTE 005 - ST00 - ST00	4,017.4	3,303.8	747.4	-1,597.5	0.319	Collision RiskProcedures Req'd
SOUTHERN UTE 005 - ST00 - ST00	4,025.0	3,303.7	747.5	-1,597.6	0.319	Collision RiskProcedures Req'd
SOUTHERN UTE 005A - ST00 - ST00	7,200.0	2,902.2	155.2	-1,969.6	0.073	Collision RiskProcedures Req'd
Southern Ute 705H - Lateral No.1 - WP2.1	3,600.0	3,564.8	122.4	114.5	15.533	CC, ES
Southern Ute 705H - Lateral No.1 - WP2.1	7,200.0	7,521.8	1,124.6	966.1	7.093	SF
Southern Ute 705H - Pilot Hole - WP2.1	3,600.0	3,577.8	101.3	91.4	10.222	CC, ES, SF

Offset Design: San Juan Basin - SOUTHERN UTE 005 - ST00 - ST00										Offset Site Error:	5.0 usft	
Survey Program: 8325-3_Blind										Offset Well Error:		1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)		
3,300.0	2,801.6	3,218.6	3,218.6	26.7	2,248.9	46.89	-1,271.7	1,871.8	1,033.4	-1,233.1	2,266.58	0.456 Collision RiskProcedures Req'd
3,325.0	2,812.5	3,229.5	3,229.5	27.1	2,256.6	61.73	-1,271.7	1,871.8	1,014.4	-1,260.2	2,274.66	0.446 Collision RiskProcedures Req'd
3,344.0	2,820.5	3,237.5	3,237.5	27.3	2,262.1	70.08	-1,271.7	1,871.8	997.6	-1,282.8	2,280.46	0.437 Collision RiskProcedures Req'd
3,350.0	2,822.9	3,239.9	3,239.9	27.4	2,263.9	70.53	-1,271.7	1,871.8	994.1	-1,288.2	2,282.27	0.436 Collision RiskProcedures Req'd
3,375.0	2,832.9	3,249.9	3,249.9	27.5	2,270.8	72.42	-1,271.7	1,871.8	979.2	-1,310.3	2,289.58	0.428 Collision RiskProcedures Req'd
3,400.0	2,842.0	3,259.0	3,259.0	27.7	2,277.2	74.29	-1,271.7	1,871.8	964.5	-1,331.8	2,296.39	0.420 Collision RiskProcedures Req'd
3,425.0	2,850.4	3,267.4	3,267.4	27.9	2,283.1	76.12	-1,271.7	1,871.8	950.0	-1,352.7	2,302.70	0.413 Collision RiskProcedures Req'd
3,450.0	2,858.0	3,275.0	3,275.0	28.1	2,288.4	77.90	-1,271.7	1,871.8	935.6	-1,372.9	2,308.50	0.405 Collision RiskProcedures Req'd
3,475.0	2,864.9	3,281.9	3,281.9	28.3	2,293.2	79.61	-1,271.7	1,871.8	921.5	-1,392.3	2,313.79	0.398 Collision RiskProcedures Req'd
3,500.0	2,870.9	3,287.9	3,287.9	28.5	2,297.4	81.26	-1,271.7	1,871.8	907.6	-1,410.9	2,318.55	0.391 Collision RiskProcedures Req'd
3,525.0	2,876.2	3,293.2	3,293.2	28.8	2,301.1	82.82	-1,271.7	1,871.8	894.1	-1,428.7	2,322.80	0.385 Collision RiskProcedures Req'd
3,550.0	2,880.6	3,297.6	3,297.6	29.0	2,304.2	84.29	-1,271.7	1,871.8	880.9	-1,445.6	2,326.52	0.379 Collision RiskProcedures Req'd
3,575.0	2,884.3	3,301.3	3,301.3	29.3	2,306.7	85.66	-1,271.7	1,871.8	868.2	-1,461.5	2,329.71	0.373 Collision RiskProcedures Req'd
3,600.0	2,887.1	3,304.1	3,304.1	29.5	2,308.7	86.92	-1,271.7	1,871.8	855.9	-1,476.5	2,332.35	0.367 Collision RiskProcedures Req'd
3,625.0	2,889.1	3,306.1	3,306.1	29.8	2,310.1	88.08	-1,271.7	1,871.8	844.1	-1,490.4	2,334.46	0.362 Collision RiskProcedures Req'd
3,650.0	2,890.3	3,307.3	3,307.3	30.1	2,310.9	89.11	-1,271.7	1,871.8	832.8	-1,503.2	2,336.01	0.357 Collision RiskProcedures Req'd
3,675.0	2,890.7	3,307.7	3,307.7	30.4	2,311.2	90.03	-1,271.7	1,871.8	822.1	-1,514.9	2,337.02	0.352 Collision RiskProcedures Req'd
3,683.0	2,890.6	3,307.6	3,307.6	30.5	2,311.2	90.29	-1,271.7	1,871.8	818.8	-1,518.4	2,337.23	0.350 Collision RiskProcedures Req'd
3,700.0	2,890.4	3,307.4	3,307.4	30.7	2,311.0	90.28	-1,271.7	1,871.8	812.0	-1,525.6	2,337.61	0.347 Collision RiskProcedures Req'd
3,725.0	2,890.2	3,307.2	3,307.2	31.0	2,310.8	90.26	-1,271.7	1,871.8	802.6	-1,535.6	2,338.20	0.343 Collision RiskProcedures Req'd
3,750.0	2,889.9	3,306.9	3,306.9	31.3	2,310.6	90.24	-1,271.7	1,871.8	793.8	-1,545.0	2,338.79	0.339 Collision RiskProcedures Req'd

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - SOUTHERN UTE 005 - ST00 - ST00											Offset Site Error:	5.0 usft	
Survey Program: 8325-3_Blind											Offset Well Error:	1.0 usft	
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
3,775.0	2,889.6	3,306.6	3,306.6	31.7	2,310.4	90.21	-1,271.7	1,871.8	785.7	-1,553.6	2,339.38	0.336	Collision RiskProcedures Req'd
3,800.0	2,889.3	3,306.3	3,306.3	32.0	2,310.2	90.19	-1,271.7	1,871.8	778.4	-1,561.6	2,339.98	0.333	Collision RiskProcedures Req'd
3,825.0	2,889.0	3,306.0	3,306.0	32.3	2,310.0	90.17	-1,271.7	1,871.8	771.8	-1,568.8	2,340.59	0.330	Collision RiskProcedures Req'd
3,850.0	2,888.7	3,305.7	3,305.7	32.7	2,309.8	90.15	-1,271.7	1,871.8	765.9	-1,575.3	2,341.20	0.327	Collision RiskProcedures Req'd
3,875.0	2,888.4	3,305.4	3,305.4	33.0	2,309.6	90.13	-1,271.7	1,871.8	760.9	-1,580.9	2,341.80	0.325	Collision RiskProcedures Req'd
3,900.0	2,888.1	3,305.1	3,305.1	33.4	2,309.4	90.10	-1,271.7	1,871.8	756.6	-1,585.8	2,342.38	0.323	Collision RiskProcedures Req'd
3,925.0	2,887.8	3,304.8	3,304.8	33.8	2,309.2	90.08	-1,271.7	1,871.8	753.1	-1,589.8	2,342.97	0.321	Collision RiskProcedures Req'd
3,950.0	2,887.6	3,304.6	3,304.6	34.2	2,309.0	90.06	-1,271.7	1,871.8	750.5	-1,593.1	2,343.53	0.320	Collision RiskProcedures Req'd
3,975.0	2,887.3	3,304.3	3,304.3	34.6	2,308.8	90.04	-1,271.7	1,871.8	748.6	-1,595.4	2,344.06	0.319	Collision RiskProcedures Req'd
4,000.0	2,887.0	3,304.0	3,304.0	34.9	2,308.6	90.02	-1,271.7	1,871.8	747.6	-1,596.9	2,344.57	0.319	Collision RiskProcedures Req'd
4,017.4	2,886.8	3,303.8	3,303.8	35.2	2,308.5	90.00	-1,271.7	1,871.8	747.4	-1,597.5	2,344.92	0.319	Collision RiskProcedures Req'd, CC
4,025.0	2,886.7	3,303.7	3,303.7	35.4	2,308.4	89.99	-1,271.7	1,871.8	747.5	-1,597.6	2,345.07	0.319	Collision RiskProcedures Req'd, ES, SI
4,050.0	2,886.4	3,303.4	3,303.4	35.8	2,308.2	89.97	-1,271.7	1,871.8	748.2	-1,597.4	2,345.53	0.319	Collision RiskProcedures Req'd
4,075.0	2,886.1	3,303.1	3,303.1	36.2	2,308.0	89.95	-1,271.7	1,871.8	749.7	-1,596.3	2,345.95	0.320	Collision RiskProcedures Req'd
4,100.0	2,885.8	3,302.8	3,302.8	36.6	2,307.8	89.93	-1,271.7	1,871.8	752.0	-1,594.3	2,346.33	0.321	Collision RiskProcedures Req'd
4,125.0	2,885.5	3,302.5	3,302.5	37.0	2,307.6	89.91	-1,271.7	1,871.8	755.2	-1,591.5	2,346.69	0.322	Collision RiskProcedures Req'd
4,150.0	2,885.3	3,302.3	3,302.3	37.4	2,307.4	89.88	-1,271.7	1,871.8	759.1	-1,587.9	2,347.01	0.323	Collision RiskProcedures Req'd
4,175.0	2,885.0	3,302.0	3,302.0	37.9	2,307.2	89.86	-1,271.7	1,871.8	763.9	-1,583.4	2,347.28	0.325	Collision RiskProcedures Req'd
4,200.0	2,884.7	3,301.7	3,301.7	38.3	2,307.0	89.84	-1,271.7	1,871.8	769.4	-1,578.1	2,347.51	0.328	Collision RiskProcedures Req'd
4,225.0	2,884.4	3,301.4	3,301.4	38.8	2,306.8	89.82	-1,271.7	1,871.8	775.7	-1,572.0	2,347.72	0.330	Collision RiskProcedures Req'd
4,250.0	2,884.1	3,301.1	3,301.1	39.2	2,306.6	89.79	-1,271.7	1,871.8	782.8	-1,565.1	2,347.88	0.333	Collision RiskProcedures Req'd
4,275.0	2,883.8	3,300.8	3,300.8	39.7	2,306.4	89.77	-1,271.7	1,871.8	790.6	-1,557.4	2,348.00	0.337	Collision RiskProcedures Req'd
4,300.0	2,883.5	3,300.5	3,300.5	40.1	2,306.2	89.75	-1,271.7	1,871.8	799.1	-1,549.0	2,348.08	0.340	Collision RiskProcedures Req'd
4,325.0	2,883.2	3,300.2	3,300.2	40.6	2,306.0	89.73	-1,271.7	1,871.8	808.3	-1,539.9	2,348.14	0.344	Collision RiskProcedures Req'd
4,350.0	2,883.0	3,300.0	3,300.0	41.0	2,305.8	89.71	-1,271.7	1,871.8	818.1	-1,530.0	2,348.16	0.348	Collision RiskProcedures Req'd
4,375.0	2,882.7	3,299.7	3,299.7	41.5	2,305.6	89.68	-1,271.7	1,871.8	828.6	-1,519.5	2,348.14	0.353	Collision RiskProcedures Req'd
4,400.0	2,882.4	3,299.4	3,299.4	42.0	2,305.4	89.66	-1,271.7	1,871.8	839.7	-1,508.4	2,348.09	0.358	Collision RiskProcedures Req'd
4,425.0	2,882.1	3,299.1	3,299.1	42.5	2,305.2	89.64	-1,271.7	1,871.8	851.4	-1,496.6	2,348.02	0.363	Collision RiskProcedures Req'd
4,450.0	2,881.8	3,298.8	3,298.8	42.9	2,305.0	89.62	-1,271.7	1,871.8	863.6	-1,484.3	2,347.92	0.368	Collision RiskProcedures Req'd
4,475.0	2,881.5	3,298.5	3,298.5	43.4	2,304.8	89.60	-1,271.7	1,871.8	876.4	-1,471.4	2,347.79	0.373	Collision RiskProcedures Req'd
4,500.0	2,881.2	3,298.2	3,298.2	43.9	2,304.6	89.57	-1,271.7	1,871.8	889.7	-1,457.9	2,347.64	0.379	Collision RiskProcedures Req'd
4,525.0	2,880.9	3,297.9	3,297.9	44.4	2,304.4	89.55	-1,271.7	1,871.8	903.5	-1,444.0	2,347.47	0.385	Collision RiskProcedures Req'd
4,550.0	2,880.7	3,297.7	3,297.7	44.9	2,304.2	89.53	-1,271.7	1,871.8	917.8	-1,429.5	2,347.28	0.391	Collision RiskProcedures Req'd
4,575.0	2,880.4	3,297.4	3,297.4	45.4	2,304.0	89.51	-1,271.7	1,871.8	932.5	-1,414.5	2,347.07	0.397	Collision RiskProcedures Req'd
4,600.0	2,880.1	3,297.1	3,297.1	45.9	2,303.8	89.49	-1,271.7	1,871.8	947.7	-1,399.2	2,346.85	0.404	Collision RiskProcedures Req'd
4,625.0	2,879.8	3,296.8	3,296.8	46.4	2,303.6	89.46	-1,271.7	1,871.8	963.3	-1,383.4	2,346.61	0.410	Collision RiskProcedures Req'd
4,650.0	2,879.5	3,296.5	3,296.5	46.9	2,303.4	89.44	-1,271.7	1,871.8	979.2	-1,367.1	2,346.36	0.417	Collision RiskProcedures Req'd
4,675.0	2,879.2	3,296.2	3,296.2	47.4	2,303.2	89.42	-1,271.7	1,871.8	995.5	-1,350.5	2,346.10	0.424	Collision RiskProcedures Req'd
4,700.0	2,878.9	3,295.9	3,295.9	47.9	2,303.0	89.40	-1,271.7	1,871.8	1,012.2	-1,333.6	2,345.82	0.432	Collision RiskProcedures Req'd
4,725.0	2,878.6	3,295.6	3,295.6	48.4	2,302.8	89.38	-1,271.7	1,871.8	1,029.3	-1,316.3	2,345.54	0.439	Collision RiskProcedures Req'd
4,750.0	2,878.4	3,295.4	3,295.4	48.9	2,302.6	89.35	-1,271.7	1,871.8	1,046.6	-1,298.7	2,345.25	0.446	Collision RiskProcedures Req'd
4,775.0	2,878.1	3,295.1	3,295.1	49.5	2,302.4	89.33	-1,271.7	1,871.8	1,064.3	-1,280.7	2,344.96	0.454	Collision RiskProcedures Req'd
4,800.0	2,877.8	3,294.8	3,294.8	50.0	2,302.2	89.31	-1,271.7	1,871.8	1,082.2	-1,262.5	2,344.65	0.462	Collision RiskProcedures Req'd
4,825.0	2,877.5	3,294.5	3,294.5	50.5	2,302.0	89.29	-1,271.7	1,871.8	1,100.4	-1,243.9	2,344.34	0.469	Collision RiskProcedures Req'd
4,850.0	2,877.2	3,294.2	3,294.2	51.0	2,301.8	89.27	-1,271.7	1,871.8	1,118.9	-1,225.2	2,344.03	0.477	Collision RiskProcedures Req'd
4,875.0	2,876.9	3,293.9	3,293.9	51.5	2,301.6	89.24	-1,271.7	1,871.8	1,137.6	-1,206.1	2,343.71	0.485	Collision RiskProcedures Req'd
4,900.0	2,876.6	3,293.6	3,293.6	52.1	2,301.4	89.22	-1,271.7	1,871.8	1,156.6	-1,186.8	2,343.39	0.494	Collision RiskProcedures Req'd
4,925.0	2,876.3	3,293.3	3,293.3	52.6	2,301.2	89.20	-1,271.7	1,871.8	1,175.8	-1,167.3	2,343.07	0.502	Collision RiskProcedures Req'd
4,950.0	2,876.1	3,293.1	3,293.1	53.1	2,301.0	89.18	-1,271.7	1,871.8	1,195.2	-1,147.6	2,342.75	0.510	Collision RiskProcedures Req'd
4,975.0	2,875.8	3,292.8	3,292.8	53.7	2,300.8	89.16	-1,271.7	1,871.8	1,214.8	-1,127.7	2,342.42	0.519	Collision RiskProcedures Req'd
5,000.0	2,875.5	3,292.5	3,292.5	54.2	2,300.6	89.13	-1,271.7	1,871.8	1,234.6	-1,107.5	2,342.09	0.527	Collision RiskProcedures Req'd
5,025.0	2,875.2	3,292.2	3,292.2	54.7	2,300.4	89.11	-1,271.7	1,871.8	1,254.5	-1,087.2	2,341.76	0.536	Collision RiskProcedures Req'd

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - SOUTHERN UTE 005 - ST00 - ST00											Offset Site Error: 5.0 usft		
Survey Program: 8325-3_Blind											Offset Well Error: 1.0 usft		
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,050.0	2,874.9	3,291.9	3,291.9	55.3	2,300.2	89.09	-1,271.7	1,871.8	1,274.7	-1,066.7	2,341.43	0.544	Collision RiskProcedures Req'd
5,075.0	2,874.6	3,291.6	3,291.6	55.8	2,300.0	89.07	-1,271.7	1,871.8	1,295.0	-1,046.1	2,341.11	0.553	Collision RiskProcedures Req'd
5,100.0	2,874.3	3,291.3	3,291.3	56.3	2,299.8	89.05	-1,271.7	1,871.8	1,315.5	-1,025.2	2,340.78	0.562	Collision RiskProcedures Req'd
5,125.0	2,874.0	3,291.0	3,291.0	56.9	2,299.6	89.02	-1,271.7	1,871.8	1,336.2	-1,004.3	2,340.45	0.571	Collision RiskProcedures Req'd
5,150.0	2,873.8	3,290.8	3,290.8	57.4	2,299.4	89.00	-1,271.7	1,871.8	1,357.0	-983.1	2,340.12	0.580	Collision RiskProcedures Req'd
5,175.0	2,873.5	3,290.5	3,290.5	58.0	2,299.2	88.98	-1,271.7	1,871.8	1,377.9	-961.9	2,339.79	0.589	Collision RiskProcedures Req'd
5,200.0	2,873.2	3,290.2	3,290.2	58.5	2,299.0	88.96	-1,271.7	1,871.8	1,399.0	-940.5	2,339.47	0.598	Collision RiskProcedures Req'd
5,225.0	2,872.9	3,289.9	3,289.9	59.1	2,298.8	88.93	-1,271.7	1,871.8	1,420.2	-919.0	2,339.14	0.607	Collision RiskProcedures Req'd
5,250.0	2,872.6	3,289.6	3,289.6	59.6	2,298.6	88.91	-1,271.7	1,871.8	1,441.5	-897.3	2,338.82	0.616	Collision RiskProcedures Req'd
5,275.0	2,872.3	3,289.3	3,289.3	60.2	2,298.4	88.89	-1,271.7	1,871.8	1,462.9	-875.6	2,338.49	0.626	Collision RiskProcedures Req'd
5,300.0	2,872.0	3,289.0	3,289.0	60.7	2,298.2	88.87	-1,271.7	1,871.8	1,484.5	-853.7	2,338.17	0.635	Collision RiskProcedures Req'd
5,325.0	2,871.7	3,288.7	3,288.7	61.3	2,298.0	88.85	-1,271.7	1,871.8	1,506.1	-831.7	2,337.85	0.644	Collision RiskProcedures Req'd
5,350.0	2,871.5	3,288.5	3,288.5	61.8	2,297.8	88.82	-1,271.7	1,871.8	1,527.9	-809.7	2,337.53	0.654	Collision RiskProcedures Req'd
5,375.0	2,871.2	3,288.2	3,288.2	62.4	2,297.6	88.80	-1,271.7	1,871.8	1,549.7	-787.5	2,337.22	0.663	Collision RiskProcedures Req'd
5,400.0	2,870.9	3,287.9	3,287.9	62.9	2,297.4	88.78	-1,271.7	1,871.8	1,571.7	-765.2	2,336.90	0.673	Collision RiskProcedures Req'd
5,425.0	2,870.6	3,287.6	3,287.6	63.5	2,297.2	88.76	-1,271.7	1,871.8	1,593.7	-742.9	2,336.59	0.682	Collision RiskProcedures Req'd
5,450.0	2,870.3	3,287.3	3,287.3	64.0	2,297.0	88.74	-1,271.7	1,871.8	1,615.8	-720.5	2,336.27	0.692	Collision RiskProcedures Req'd
5,475.0	2,870.0	3,287.0	3,287.0	64.6	2,296.8	88.71	-1,271.7	1,871.8	1,638.0	-697.9	2,335.96	0.701	Collision RiskProcedures Req'd
5,500.0	2,869.7	3,286.7	3,286.7	65.2	2,296.6	88.69	-1,271.7	1,871.8	1,660.3	-675.3	2,335.65	0.711	Collision RiskProcedures Req'd
5,525.0	2,869.4	3,286.4	3,286.4	65.7	2,296.4	88.67	-1,271.7	1,871.8	1,682.7	-652.7	2,335.35	0.721	Collision RiskProcedures Req'd
5,550.0	2,869.1	3,286.1	3,286.1	66.3	2,296.2	88.65	-1,271.7	1,871.8	1,705.1	-629.9	2,335.04	0.730	Collision RiskProcedures Req'd
5,575.0	2,868.9	3,285.9	3,285.9	66.9	2,296.0	88.63	-1,271.7	1,871.8	1,727.6	-607.1	2,334.74	0.740	Collision RiskProcedures Req'd
5,600.0	2,868.6	3,285.6	3,285.6	67.4	2,295.8	88.60	-1,271.7	1,871.8	1,750.2	-584.3	2,334.43	0.750	Collision RiskProcedures Req'd
5,625.0	2,868.3	3,285.3	3,285.3	68.0	2,295.6	88.58	-1,271.7	1,871.8	1,772.8	-561.3	2,334.13	0.760	Collision RiskProcedures Req'd
5,650.0	2,868.0	3,285.0	3,285.0	68.5	2,295.4	88.56	-1,271.7	1,871.8	1,795.5	-538.3	2,333.84	0.769	Collision RiskProcedures Req'd
5,675.0	2,867.7	3,284.7	3,284.7	69.1	2,295.2	88.54	-1,271.7	1,871.8	1,818.3	-515.3	2,333.54	0.779	Collision RiskProcedures Req'd
5,700.0	2,867.4	3,284.4	3,284.4	69.7	2,295.0	88.52	-1,271.7	1,871.8	1,841.1	-492.2	2,333.24	0.789	Collision RiskProcedures Req'd
5,725.0	2,867.1	3,284.1	3,284.1	70.2	2,294.8	88.49	-1,271.7	1,871.8	1,864.0	-469.0	2,332.95	0.799	Collision RiskProcedures Req'd
5,750.0	2,866.8	3,283.8	3,283.8	70.8	2,294.6	88.47	-1,271.7	1,871.8	1,886.9	-445.8	2,332.66	0.809	Collision RiskProcedures Req'd
5,775.0	2,866.6	3,283.6	3,283.6	71.4	2,294.4	88.45	-1,271.7	1,871.8	1,909.9	-422.5	2,332.37	0.819	Collision RiskProcedures Req'd
5,800.0	2,866.3	3,283.3	3,283.3	71.9	2,294.1	88.43	-1,271.7	1,871.8	1,932.9	-399.2	2,332.08	0.829	Collision RiskProcedures Req'd
5,825.0	2,866.0	3,283.0	3,283.0	72.5	2,293.9	88.41	-1,271.7	1,871.8	1,956.0	-375.8	2,331.79	0.839	Collision RiskProcedures Req'd
5,850.0	2,865.7	3,282.7	3,282.7	73.1	2,293.7	88.38	-1,271.7	1,871.8	1,979.1	-352.4	2,331.50	0.849	Collision RiskProcedures Req'd
5,875.0	2,865.4	3,282.4	3,282.4	73.7	2,293.5	88.36	-1,271.7	1,871.8	2,002.3	-329.0	2,331.22	0.859	Collision RiskProcedures Req'd
5,900.0	2,865.1	3,282.1	3,282.1	74.2	2,293.3	88.34	-1,271.7	1,871.8	2,025.5	-305.5	2,330.94	0.869	Collision RiskProcedures Req'd
5,925.0	2,864.8	3,281.8	3,281.8	74.8	2,293.1	88.32	-1,271.7	1,871.8	2,048.7	-281.9	2,330.65	0.879	Collision RiskProcedures Req'd
5,950.0	2,864.5	3,281.5	3,281.5	75.4	2,292.9	88.30	-1,271.7	1,871.8	2,072.0	-258.3	2,330.37	0.889	Collision RiskProcedures Req'd
5,975.0	2,864.3	3,281.3	3,281.3	75.9	2,292.7	88.27	-1,271.7	1,871.8	2,095.4	-234.7	2,330.10	0.899	Collision RiskProcedures Req'd
6,000.0	2,864.0	3,281.0	3,281.0	76.5	2,292.5	88.25	-1,271.7	1,871.8	2,118.7	-211.1	2,329.82	0.909	Collision RiskProcedures Req'd
6,025.0	2,863.7	3,280.7	3,280.7	77.1	2,292.3	88.23	-1,271.7	1,871.8	2,142.1	-187.4	2,329.54	0.920	Collision RiskProcedures Req'd
6,050.0	2,863.4	3,280.4	3,280.4	77.7	2,292.1	88.21	-1,271.7	1,871.8	2,165.6	-163.7	2,329.27	0.930	Collision RiskProcedures Req'd
6,075.0	2,863.1	3,280.1	3,280.1	78.2	2,291.9	88.19	-1,271.7	1,871.8	2,189.1	-139.9	2,328.99	0.940	Collision RiskProcedures Req'd
6,100.0	2,862.8	3,279.8	3,279.8	78.8	2,291.7	88.16	-1,271.7	1,871.8	2,212.6	-116.1	2,328.72	0.950	Collision RiskProcedures Req'd
6,125.0	2,862.5	3,279.5	3,279.5	79.4	2,291.5	88.14	-1,271.7	1,871.8	2,236.1	-92.3	2,328.45	0.960	Collision RiskProcedures Req'd
6,150.0	2,862.2	3,279.2	3,279.2	80.0	2,291.3	88.12	-1,271.7	1,871.8	2,259.7	-68.5	2,328.18	0.971	Collision RiskProcedures Req'd
6,175.0	2,862.0	3,279.0	3,279.0	80.6	2,291.1	88.10	-1,271.7	1,871.8	2,283.3	-44.6	2,327.91	0.981	Collision RiskProcedures Req'd
6,200.0	2,861.7	3,278.7	3,278.7	81.1	2,290.9	88.08	-1,271.7	1,871.8	2,306.9	-20.7	2,327.65	0.991	Collision RiskProcedures Req'd
6,225.0	2,861.4	3,278.4	3,278.4	81.7	2,290.7	88.05	-1,271.7	1,871.8	2,330.6	3.2	2,327.38	1.001	Collision RiskProcedures Req'd
6,250.0	2,861.1	3,278.1	3,278.1	82.3	2,290.5	88.03	-1,271.7	1,871.8	2,354.3	27.2	2,327.12	1.012	Collision RiskProcedures Req'd
6,275.0	2,860.8	3,277.8	3,277.8	82.9	2,290.3	88.01	-1,271.7	1,871.8	2,378.0	51.2	2,326.85	1.022	Collision RiskProcedures Req'd
6,300.0	2,860.5	3,277.5	3,277.5	83.5	2,290.1	87.99	-1,271.7	1,871.8	2,401.8	75.2	2,326.59	1.032	Collision RiskProcedures Req'd
6,325.0	2,860.2	3,277.2	3,277.2	84.0	2,289.9	87.97	-1,271.7	1,871.8	2,425.5	99.2	2,326.33	1.043	Collision RiskProcedures Req'd

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - SOUTHERN UTE 005 - ST00 - ST00												Offset Site Error:	5.0 usft
Survey Program: 8325-3_Blind										Rule Assigned:		Offset Well Error:	1.0 usft
Measured Depth (usft)	Vertical Reference Depth (usft)	Measured Offset Depth (usft)	Vertical Offset 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
6,350.0	2,859.9	3,276.9	3,276.9	84.6	2,289.7	87.94	-1,271.7	1,871.8	2,449.3	123.3	2,326.07	1.053	Collision RiskProcedures Req'd
6,375.0	2,859.7	3,276.7	3,276.7	85.2	2,289.5	87.92	-1,271.7	1,871.8	2,473.1	147.3	2,325.81	1.063	Collision RiskProcedures Req'd
6,400.0	2,859.4	3,276.4	3,276.4	85.8	2,289.3	87.90	-1,271.7	1,871.8	2,497.0	171.4	2,325.55	1.074	Collision RiskProcedures Req'd
6,425.0	2,859.1	3,276.1	3,276.1	86.4	2,289.1	87.88	-1,271.7	1,871.8	2,520.8	195.6	2,325.30	1.084	Collision RiskProcedures Req'd
6,450.0	2,858.8	3,275.8	3,275.8	86.9	2,288.9	87.86	-1,271.7	1,871.8	2,544.7	219.7	2,325.04	1.094	Collision RiskProcedures Req'd
6,475.0	2,858.5	3,275.5	3,275.5	87.5	2,288.7	87.83	-1,271.7	1,871.8	2,568.6	243.9	2,324.79	1.105	Collision RiskProcedures Req'd
6,500.0	2,858.2	3,275.2	3,275.2	88.1	2,288.5	87.81	-1,271.7	1,871.8	2,592.6	268.0	2,324.53	1.115	Collision RiskProcedures Req'd
6,525.0	2,857.9	3,274.9	3,274.9	88.7	2,288.3	87.79	-1,271.7	1,871.8	2,616.5	292.2	2,324.28	1.126	Collision RiskProcedures Req'd
6,550.0	2,857.6	3,274.6	3,274.6	89.3	2,288.1	87.77	-1,271.7	1,871.8	2,640.5	316.5	2,324.03	1.136	Collision RiskProcedures Req'd
6,575.0	2,857.4	3,274.4	3,274.4	89.9	2,287.9	87.75	-1,271.7	1,871.8	2,664.5	340.7	2,323.78	1.147	Collision RiskProcedures Req'd
6,600.0	2,857.1	3,274.1	3,274.1	90.4	2,287.7	87.72	-1,271.7	1,871.8	2,688.5	364.9	2,323.53	1.157	Collision RiskProcedures Req'd
6,625.0	2,856.8	3,273.8	3,273.8	91.0	2,287.5	87.70	-1,271.7	1,871.8	2,712.5	389.2	2,323.28	1.168	Collision RiskProcedures Req'd
6,650.0	2,856.5	3,273.5	3,273.5	91.6	2,287.3	87.68	-1,271.7	1,871.8	2,736.5	413.5	2,323.03	1.178	Collision RiskProcedures Req'd
6,675.0	2,856.2	3,273.2	3,273.2	92.2	2,287.1	87.66	-1,271.7	1,871.8	2,760.6	437.8	2,322.78	1.188	Collision RiskProcedures Req'd
6,700.0	2,855.9	3,272.9	3,272.9	92.8	2,286.9	87.64	-1,271.7	1,871.8	2,784.7	462.1	2,322.53	1.199	Collision RiskProcedures Req'd
6,725.0	2,855.6	3,272.6	3,272.6	93.4	2,286.7	87.61	-1,271.7	1,871.8	2,808.7	486.5	2,322.29	1.209	Collision RiskProcedures Req'd
6,750.0	2,855.3	3,272.3	3,272.3	94.0	2,286.5	87.59	-1,271.7	1,871.8	2,832.9	510.8	2,322.04	1.220	Collision RiskProcedures Req'd
6,775.0	2,855.1	3,272.1	3,272.1	94.5	2,286.3	87.57	-1,271.7	1,871.8	2,857.0	535.2	2,321.80	1.231	Collision RiskProcedures Req'd
6,800.0	2,854.8	3,271.8	3,271.8	95.1	2,286.1	87.55	-1,271.7	1,871.8	2,881.1	559.6	2,321.55	1.241	Collision RiskProcedures Req'd
6,825.0	2,854.5	3,271.5	3,271.5	95.7	2,285.9	87.53	-1,271.7	1,871.8	2,905.3	583.9	2,321.31	1.252	Collision RiskProcedures Req'd
6,850.0	2,854.2	3,271.2	3,271.2	96.3	2,285.7	87.50	-1,271.7	1,871.8	2,929.4	608.4	2,321.07	1.262	Collision RiskProcedures Req'd
6,875.0	2,853.9	3,270.9	3,270.9	96.9	2,285.5	87.48	-1,271.7	1,871.8	2,953.6	632.8	2,320.83	1.273	Collision RiskProcedures Req'd
6,900.0	2,853.6	3,270.6	3,270.6	97.5	2,285.3	87.46	-1,271.7	1,871.8	2,977.8	657.2	2,320.59	1.283	Collision RiskProcedures Req'd
6,925.0	2,853.3	3,270.3	3,270.3	98.1	2,285.1	87.44	-1,271.7	1,871.8	3,002.0	681.6	2,320.35	1.294	Collision RiskProcedures Req'd
6,950.0	2,853.0	3,270.0	3,270.0	98.7	2,284.9	87.41	-1,271.7	1,871.8	3,026.2	706.1	2,320.11	1.304	Collision RiskProcedures Req'd
6,975.0	2,852.8	3,269.8	3,269.8	99.2	2,284.7	87.39	-1,271.7	1,871.8	3,050.4	730.6	2,319.87	1.315	Collision RiskProcedures Req'd
7,000.0	2,852.5	3,269.5	3,269.5	99.8	2,284.5	87.37	-1,271.7	1,871.8	3,074.7	755.1	2,319.63	1.326	Collision RiskProcedures Req'd
7,025.0	2,852.2	3,269.2	3,269.2	100.4	2,284.3	87.35	-1,271.7	1,871.8	3,098.9	779.5	2,319.39	1.336	Collision RiskProcedures Req'd
7,050.0	2,851.9	3,268.9	3,268.9	101.0	2,284.1	87.33	-1,271.7	1,871.8	3,123.2	804.0	2,319.16	1.347	Collision RiskProcedures Req'd
7,075.0	2,851.6	3,268.6	3,268.6	101.6	2,283.9	87.30	-1,271.7	1,871.8	3,147.5	828.6	2,318.92	1.357	Collision RiskProcedures Req'd
7,100.0	2,851.3	3,268.3	3,268.3	102.2	2,283.7	87.28	-1,271.7	1,871.8	3,171.8	853.1	2,318.68	1.368	Collision RiskProcedures Req'd
7,125.0	2,851.0	3,268.0	3,268.0	102.8	2,283.5	87.26	-1,271.7	1,871.8	3,196.1	877.6	2,318.45	1.379	Collision RiskProcedures Req'd
7,150.0	2,850.7	3,267.7	3,267.7	103.4	2,283.3	87.24	-1,271.7	1,871.8	3,220.4	902.2	2,318.21	1.389	Collision RiskProcedures Req'd
7,175.0	2,850.4	3,267.4	3,267.4	104.0	2,283.1	87.22	-1,271.7	1,871.8	3,244.7	926.7	2,317.98	1.400	Collision RiskProcedures Req'd
7,200.0	2,850.2	3,267.2	3,267.2	104.6	2,282.9	87.19	-1,271.7	1,871.8	3,269.0	951.3	2,317.75	1.410	Collision RiskProcedures Req'd

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - SOUTHERN UTE 005A - ST00 - ST00												Offset Site Error:	5.0 usft	
Survey Program: 5719-3_Blind										Rule Assigned:		Offset Well Error:		1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	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)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
3,300.0	2,801.6	2,853.6	2,853.6	26.7	1,992.3	-45.44	-429.1	5,133.6	3,952.0	1,942.2	2,009.80	1.966	Collision RiskProcedures Req'd	
3,325.0	2,812.5	2,864.5	2,864.5	27.1	1,999.9	-24.13	-429.1	5,133.6	3,930.6	1,912.8	2,017.80	1.948	Collision RiskProcedures Req'd	
3,344.0	2,820.5	2,872.5	2,872.5	27.3	2,005.4	-3.08	-429.1	5,133.6	3,915.7	1,892.1	2,023.61	1.935	Collision RiskProcedures Req'd	
3,350.0	2,822.9	2,874.9	2,874.9	27.4	2,007.2	-3.18	-429.1	5,133.6	3,910.2	1,884.9	2,025.36	1.931	Collision RiskProcedures Req'd	
3,375.0	2,832.9	2,884.9	2,884.9	27.5	2,014.1	-3.62	-429.1	5,133.6	3,887.3	1,855.0	2,032.30	1.913	Collision RiskProcedures Req'd	
3,400.0	2,842.0	2,894.0	2,894.0	27.7	2,020.5	-4.13	-429.1	5,133.6	3,864.0	1,825.3	2,038.71	1.895	Collision RiskProcedures Req'd	
3,425.0	2,850.4	2,902.4	2,902.4	27.9	2,026.4	-4.75	-429.1	5,133.6	3,840.5	1,795.9	2,044.58	1.878	Collision RiskProcedures Req'd	
3,450.0	2,858.0	2,910.0	2,910.0	28.1	2,031.7	-5.49	-429.1	5,133.6	3,816.7	1,766.8	2,049.92	1.862	Collision RiskProcedures Req'd	
3,475.0	2,864.9	2,916.9	2,916.9	28.3	2,036.5	-6.42	-429.1	5,133.6	3,792.7	1,738.0	2,054.71	1.846	Collision RiskProcedures Req'd	
3,500.0	2,870.9	2,922.9	2,922.9	28.5	2,040.7	-7.61	-429.1	5,133.6	3,768.4	1,709.5	2,058.95	1.830	Collision RiskProcedures Req'd	
3,525.0	2,876.2	2,928.2	2,928.2	28.8	2,044.3	-9.19	-429.1	5,133.6	3,744.0	1,681.4	2,062.63	1.815	Collision RiskProcedures Req'd	
3,550.0	2,880.6	2,932.6	2,932.6	29.0	2,047.4	-11.39	-429.1	5,133.6	3,719.4	1,653.7	2,065.76	1.801	Collision RiskProcedures Req'd	
3,575.0	2,884.3	2,936.3	2,936.3	29.3	2,050.0	-14.63	-429.1	5,133.6	3,694.7	1,626.4	2,068.31	1.786	Collision RiskProcedures Req'd	
3,600.0	2,887.1	2,939.1	2,939.1	29.5	2,052.0	-19.84	-429.1	5,133.6	3,669.9	1,599.6	2,070.31	1.773	Collision RiskProcedures Req'd	
3,625.0	2,889.1	2,941.1	2,941.1	29.8	2,053.4	-29.34	-429.1	5,133.6	3,645.0	1,573.2	2,071.73	1.759	Collision RiskProcedures Req'd	
3,650.0	2,890.3	2,942.3	2,942.3	30.1	2,054.2	-49.72	-429.1	5,133.6	3,620.0	1,547.4	2,072.59	1.747	Collision RiskProcedures Req'd	
3,675.0	2,890.7	2,942.7	2,942.7	30.4	2,054.5	-91.53	-429.1	5,133.6	3,595.0	1,522.2	2,072.87	1.734	Collision RiskProcedures Req'd	
3,683.0	2,890.6	2,942.6	2,942.6	30.5	2,054.4	-106.45	-429.1	5,133.6	3,587.0	1,514.2	2,072.84	1.730	Collision RiskProcedures Req'd	
3,700.0	2,890.4	2,942.4	2,942.4	30.7	2,054.3	-106.37	-429.1	5,133.6	3,570.1	1,497.3	2,072.72	1.722	Collision RiskProcedures Req'd	
3,725.0	2,890.2	2,942.2	2,942.2	31.0	2,054.1	-106.27	-429.1	5,133.6	3,545.1	1,472.5	2,072.53	1.711	Collision RiskProcedures Req'd	
3,750.0	2,889.9	2,941.9	2,941.9	31.3	2,053.9	-106.16	-429.1	5,133.6	3,520.1	1,447.7	2,072.35	1.699	Collision RiskProcedures Req'd	
3,775.0	2,889.6	2,941.6	2,941.6	31.7	2,053.7	-106.05	-429.1	5,133.6	3,495.1	1,422.9	2,072.17	1.687	Collision RiskProcedures Req'd	
3,800.0	2,889.3	2,941.3	2,941.3	32.0	2,053.5	-105.94	-429.1	5,133.6	3,470.1	1,398.2	2,071.98	1.675	Collision RiskProcedures Req'd	
3,825.0	2,889.0	2,941.0	2,941.0	32.3	2,053.3	-105.83	-429.1	5,133.6	3,445.2	1,373.4	2,071.80	1.663	Collision RiskProcedures Req'd	
3,850.0	2,888.7	2,940.7	2,940.7	32.7	2,053.1	-105.72	-429.1	5,133.6	3,420.2	1,348.6	2,071.62	1.651	Collision RiskProcedures Req'd	
3,875.0	2,888.4	2,940.4	2,940.4	33.0	2,052.9	-105.61	-429.1	5,133.6	3,395.2	1,323.8	2,071.43	1.639	Collision RiskProcedures Req'd	
3,900.0	2,888.1	2,940.1	2,940.1	33.4	2,052.7	-105.50	-429.1	5,133.6	3,370.2	1,299.0	2,071.25	1.627	Collision RiskProcedures Req'd	
3,925.0	2,887.8	2,939.8	2,939.8	33.8	2,052.5	-105.39	-429.1	5,133.6	3,345.2	1,274.2	2,071.07	1.615	Collision RiskProcedures Req'd	
3,950.0	2,887.6	2,939.6	2,939.6	34.2	2,052.3	-105.28	-429.1	5,133.6	3,320.3	1,249.4	2,070.89	1.603	Collision RiskProcedures Req'd	
3,975.0	2,887.3	2,939.3	2,939.3	34.6	2,052.1	-105.17	-429.1	5,133.6	3,295.3	1,224.6	2,070.70	1.591	Collision RiskProcedures Req'd	
4,000.0	2,887.0	2,939.0	2,939.0	34.9	2,051.9	-105.06	-429.1	5,133.6	3,270.3	1,199.8	2,070.52	1.579	Collision RiskProcedures Req'd	
4,025.0	2,886.7	2,938.7	2,938.7	35.4	2,051.7	-104.95	-429.1	5,133.6	3,245.3	1,175.0	2,070.34	1.568	Collision RiskProcedures Req'd	
4,050.0	2,886.4	2,938.4	2,938.4	35.8	2,051.5	-104.84	-429.1	5,133.6	3,220.4	1,150.2	2,070.16	1.556	Collision RiskProcedures Req'd	
4,075.0	2,886.1	2,938.1	2,938.1	36.2	2,051.3	-104.73	-429.1	5,133.6	3,195.4	1,125.4	2,069.98	1.544	Collision RiskProcedures Req'd	
4,100.0	2,885.8	2,937.8	2,937.8	36.6	2,051.1	-104.62	-429.1	5,133.6	3,170.4	1,100.6	2,069.80	1.532	Collision RiskProcedures Req'd	
4,125.0	2,885.5	2,937.5	2,937.5	37.0	2,050.9	-104.51	-429.1	5,133.6	3,145.4	1,075.8	2,069.62	1.520	Collision RiskProcedures Req'd	
4,150.0	2,885.3	2,937.3	2,937.3	37.4	2,050.7	-104.40	-429.1	5,133.6	3,120.5	1,051.0	2,069.44	1.508	Collision RiskProcedures Req'd	
4,175.0	2,885.0	2,937.0	2,937.0	37.9	2,050.5	-104.29	-429.1	5,133.6	3,095.5	1,026.2	2,069.26	1.496	Collision RiskProcedures Req'd	
4,200.0	2,884.7	2,936.7	2,936.7	38.3	2,050.3	-104.18	-429.1	5,133.6	3,070.5	1,001.4	2,069.08	1.484	Collision RiskProcedures Req'd	
4,225.0	2,884.4	2,936.4	2,936.4	38.8	2,050.1	-104.07	-429.1	5,133.6	3,045.6	976.7	2,068.90	1.472	Collision RiskProcedures Req'd	
4,250.0	2,884.1	2,936.1	2,936.1	39.2	2,049.9	-103.96	-429.1	5,133.6	3,020.6	951.9	2,068.73	1.460	Collision RiskProcedures Req'd	
4,275.0	2,883.8	2,935.8	2,935.8	39.7	2,049.7	-103.85	-429.1	5,133.6	2,995.6	927.1	2,068.55	1.448	Collision RiskProcedures Req'd	
4,300.0	2,883.5	2,935.5	2,935.5	40.1	2,049.5	-103.73	-429.1	5,133.6	2,970.6	902.3	2,068.37	1.436	Collision RiskProcedures Req'd	
4,325.0	2,883.2	2,935.2	2,935.2	40.6	2,049.3	-103.62	-429.1	5,133.6	2,945.7	877.5	2,068.19	1.424	Collision RiskProcedures Req'd	
4,350.0	2,883.0	2,935.0	2,935.0	41.0	2,049.1	-103.51	-429.1	5,133.6	2,920.7	852.7	2,068.02	1.412	Collision RiskProcedures Req'd	
4,375.0	2,882.7	2,934.7	2,934.7	41.5	2,048.9	-103.40	-429.1	5,133.6	2,895.7	827.9	2,067.84	1.400	Collision RiskProcedures Req'd	
4,400.0	2,882.4	2,934.4	2,934.4	42.0	2,048.7	-103.29	-429.1	5,133.6	2,870.8	803.1	2,067.67	1.388	Collision RiskProcedures Req'd	
4,425.0	2,882.1	2,934.1	2,934.1	42.5	2,048.5	-103.18	-429.1	5,133.6	2,845.8	778.3	2,067.49	1.376	Collision RiskProcedures Req'd	
4,450.0	2,881.8	2,933.8	2,933.8	42.9	2,048.3	-103.06	-429.1	5,133.6	2,820.8	753.5	2,067.32	1.364	Collision RiskProcedures Req'd	
4,475.0	2,881.5	2,933.5	2,933.5	43.4	2,048.1	-102.95	-429.1	5,133.6	2,795.9	728.7	2,067.14	1.353	Collision RiskProcedures Req'd	
4,500.0	2,881.2	2,933.2	2,933.2	43.9	2,047.9	-102.84	-429.1	5,133.6	2,770.9	703.9	2,066.97	1.341	Collision RiskProcedures Req'd	
4,525.0	2,880.9	2,932.9	2,932.9	44.4	2,047.7	-102.73	-429.1	5,133.6	2,745.9	679.1	2,066.79	1.329	Collision RiskProcedures Req'd	

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - SOUTHERN UTE 005A - ST00 - ST00											Offset Site Error:	5.0 usft	
Survey Program: 5719-3_Blind											Offset Well Error:	1.0 usft	
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
4,550.0	2,880.7	2,932.7	2,932.7	44.9	2,047.5	-102.62	-429.1	5,133.6	2,721.0	654.3	2,066.62	1.317	Collision RiskProcedures Req'd
4,575.0	2,880.4	2,932.4	2,932.4	45.4	2,047.3	-102.50	-429.1	5,133.6	2,696.0	629.5	2,066.45	1.305	Collision RiskProcedures Req'd
4,600.0	2,880.1	2,932.1	2,932.1	45.9	2,047.1	-102.39	-429.1	5,133.6	2,671.0	604.8	2,066.28	1.293	Collision RiskProcedures Req'd
4,625.0	2,879.8	2,931.8	2,931.8	46.4	2,046.9	-102.28	-429.1	5,133.6	2,646.1	580.0	2,066.10	1.281	Collision RiskProcedures Req'd
4,650.0	2,879.5	2,931.5	2,931.5	46.9	2,046.7	-102.17	-429.1	5,133.6	2,621.1	555.2	2,065.93	1.269	Collision RiskProcedures Req'd
4,675.0	2,879.2	2,931.2	2,931.2	47.4	2,046.5	-102.05	-429.1	5,133.6	2,596.1	530.4	2,065.76	1.257	Collision RiskProcedures Req'd
4,700.0	2,878.9	2,930.9	2,930.9	47.9	2,046.3	-101.94	-429.1	5,133.6	2,571.2	505.6	2,065.59	1.245	Collision RiskProcedures Req'd
4,725.0	2,878.6	2,930.6	2,930.6	48.4	2,046.1	-101.83	-429.1	5,133.6	2,546.2	480.8	2,065.42	1.233	Collision RiskProcedures Req'd
4,750.0	2,878.4	2,930.4	2,930.4	48.9	2,045.9	-101.71	-429.1	5,133.6	2,521.3	456.0	2,065.26	1.221	Collision RiskProcedures Req'd
4,775.0	2,878.1	2,930.1	2,930.1	49.5	2,045.7	-101.60	-429.1	5,133.6	2,496.3	431.2	2,065.09	1.209	Collision RiskProcedures Req'd
4,800.0	2,877.8	2,929.8	2,929.8	50.0	2,045.5	-101.49	-429.1	5,133.6	2,471.3	406.4	2,064.92	1.197	Collision RiskProcedures Req'd
4,825.0	2,877.5	2,929.5	2,929.5	50.5	2,045.3	-101.37	-429.1	5,133.6	2,446.4	381.6	2,064.75	1.185	Collision RiskProcedures Req'd
4,850.0	2,877.2	2,929.2	2,929.2	51.0	2,045.1	-101.26	-429.1	5,133.6	2,421.4	356.8	2,064.59	1.173	Collision RiskProcedures Req'd
4,875.0	2,876.9	2,928.9	2,928.9	51.5	2,044.9	-101.15	-429.1	5,133.6	2,396.5	332.0	2,064.42	1.161	Collision RiskProcedures Req'd
4,900.0	2,876.6	2,928.6	2,928.6	52.1	2,044.7	-101.03	-429.1	5,133.6	2,371.5	307.3	2,064.26	1.149	Collision RiskProcedures Req'd
4,925.0	2,876.3	2,928.3	2,928.3	52.6	2,044.5	-100.92	-429.1	5,133.6	2,346.6	282.5	2,064.10	1.137	Collision RiskProcedures Req'd
4,950.0	2,876.1	2,928.1	2,928.1	53.1	2,044.3	-100.81	-429.1	5,133.6	2,321.6	257.7	2,063.93	1.125	Collision RiskProcedures Req'd
4,975.0	2,875.8	2,927.8	2,927.8	53.7	2,044.1	-100.69	-429.1	5,133.6	2,296.7	232.9	2,063.77	1.113	Collision RiskProcedures Req'd
5,000.0	2,875.5	2,927.5	2,927.5	54.2	2,043.9	-100.58	-429.1	5,133.6	2,271.7	208.1	2,063.61	1.101	Collision RiskProcedures Req'd
5,025.0	2,875.2	2,927.2	2,927.2	54.7	2,043.7	-100.46	-429.1	5,133.6	2,246.8	183.3	2,063.45	1.089	Collision RiskProcedures Req'd
5,050.0	2,874.9	2,926.9	2,926.9	55.3	2,043.5	-100.35	-429.1	5,133.6	2,221.8	158.5	2,063.29	1.077	Collision RiskProcedures Req'd
5,075.0	2,874.6	2,926.6	2,926.6	55.8	2,043.3	-100.24	-429.1	5,133.6	2,196.9	133.7	2,063.13	1.065	Collision RiskProcedures Req'd
5,100.0	2,874.3	2,926.3	2,926.3	56.3	2,043.1	-100.12	-429.1	5,133.6	2,171.9	108.9	2,062.98	1.053	Collision RiskProcedures Req'd
5,125.0	2,874.0	2,926.0	2,926.0	56.9	2,042.9	-100.01	-429.1	5,133.6	2,147.0	84.1	2,062.82	1.041	Collision RiskProcedures Req'd
5,150.0	2,873.8	2,925.8	2,925.8	57.4	2,042.7	-99.89	-429.1	5,133.6	2,122.0	59.3	2,062.67	1.029	Collision RiskProcedures Req'd
5,175.0	2,873.5	2,925.5	2,925.5	58.0	2,042.5	-99.78	-429.1	5,133.6	2,097.1	34.6	2,062.51	1.017	Collision RiskProcedures Req'd
5,200.0	2,873.2	2,925.2	2,925.2	58.5	2,042.3	-99.66	-429.1	5,133.6	2,072.1	9.8	2,062.36	1.005	Collision RiskProcedures Req'd
5,225.0	2,872.9	2,924.9	2,924.9	59.1	2,042.1	-99.55	-429.1	5,133.6	2,047.2	-15.0	2,062.21	0.993	Collision RiskProcedures Req'd
5,250.0	2,872.6	2,924.6	2,924.6	59.6	2,041.9	-99.43	-429.1	5,133.6	2,022.3	-39.8	2,062.06	0.981	Collision RiskProcedures Req'd
5,275.0	2,872.3	2,924.3	2,924.3	60.2	2,041.7	-99.32	-429.1	5,133.6	1,997.3	-64.6	2,061.91	0.969	Collision RiskProcedures Req'd
5,300.0	2,872.0	2,924.0	2,924.0	60.7	2,041.4	-99.20	-429.1	5,133.6	1,972.4	-89.4	2,061.77	0.957	Collision RiskProcedures Req'd
5,325.0	2,871.7	2,923.7	2,923.7	61.3	2,041.2	-99.09	-429.1	5,133.6	1,947.4	-114.2	2,061.62	0.945	Collision RiskProcedures Req'd
5,350.0	2,871.5	2,923.5	2,923.5	61.8	2,041.0	-98.97	-429.1	5,133.6	1,922.5	-139.0	2,061.48	0.933	Collision RiskProcedures Req'd
5,375.0	2,871.2	2,923.2	2,923.2	62.4	2,040.8	-98.86	-429.1	5,133.6	1,897.6	-163.8	2,061.34	0.921	Collision RiskProcedures Req'd
5,400.0	2,870.9	2,922.9	2,922.9	62.9	2,040.6	-98.74	-429.1	5,133.6	1,872.6	-188.5	2,061.20	0.909	Collision RiskProcedures Req'd
5,425.0	2,870.6	2,922.6	2,922.6	63.5	2,040.4	-98.63	-429.1	5,133.6	1,847.7	-213.3	2,061.06	0.896	Collision RiskProcedures Req'd
5,450.0	2,870.3	2,922.3	2,922.3	64.0	2,040.2	-98.51	-429.1	5,133.6	1,822.8	-238.1	2,060.92	0.884	Collision RiskProcedures Req'd
5,475.0	2,870.0	2,922.0	2,922.0	64.6	2,040.0	-98.40	-429.1	5,133.6	1,797.9	-262.9	2,060.79	0.872	Collision RiskProcedures Req'd
5,500.0	2,869.7	2,921.7	2,921.7	65.2	2,039.8	-98.28	-429.1	5,133.6	1,772.9	-287.7	2,060.65	0.860	Collision RiskProcedures Req'd
5,525.0	2,869.4	2,921.4	2,921.4	65.7	2,039.6	-98.17	-429.1	5,133.6	1,748.0	-312.5	2,060.52	0.848	Collision RiskProcedures Req'd
5,550.0	2,869.1	2,921.1	2,921.1	66.3	2,039.4	-98.05	-429.1	5,133.6	1,723.1	-337.3	2,060.40	0.836	Collision RiskProcedures Req'd
5,575.0	2,868.9	2,920.9	2,920.9	66.9	2,039.2	-97.94	-429.1	5,133.6	1,698.2	-362.1	2,060.27	0.824	Collision RiskProcedures Req'd
5,600.0	2,868.6	2,920.6	2,920.6	67.4	2,039.0	-97.82	-429.1	5,133.6	1,673.3	-386.9	2,060.15	0.812	Collision RiskProcedures Req'd
5,625.0	2,868.3	2,920.3	2,920.3	68.0	2,038.8	-97.70	-429.1	5,133.6	1,648.4	-411.7	2,060.03	0.800	Collision RiskProcedures Req'd
5,650.0	2,868.0	2,920.0	2,920.0	68.5	2,038.6	-97.59	-429.1	5,133.6	1,623.5	-436.4	2,059.91	0.788	Collision RiskProcedures Req'd
5,675.0	2,867.7	2,919.7	2,919.7	69.1	2,038.4	-97.47	-429.1	5,133.6	1,598.6	-461.2	2,059.80	0.776	Collision RiskProcedures Req'd
5,700.0	2,867.4	2,919.4	2,919.4	69.7	2,038.2	-97.36	-429.1	5,133.6	1,573.7	-486.0	2,059.68	0.764	Collision RiskProcedures Req'd
5,725.0	2,867.1	2,919.1	2,919.1	70.2	2,038.0	-97.24	-429.1	5,133.6	1,548.8	-510.8	2,059.58	0.752	Collision RiskProcedures Req'd
5,750.0	2,866.8	2,918.8	2,918.8	70.8	2,037.8	-97.12	-429.1	5,133.6	1,523.9	-535.6	2,059.47	0.740	Collision RiskProcedures Req'd
5,775.0	2,866.6	2,918.6	2,918.6	71.4	2,037.6	-97.01	-429.1	5,133.6	1,499.0	-560.4	2,059.37	0.728	Collision RiskProcedures Req'd
5,800.0	2,866.3	2,918.3	2,918.3	71.9	2,037.4	-96.89	-429.1	5,133.6	1,474.1	-585.2	2,059.27	0.716	Collision RiskProcedures Req'd
5,825.0	2,866.0	2,918.0	2,918.0	72.5	2,037.2	-96.78	-429.1	5,133.6	1,449.2	-610.0	2,059.18	0.704	Collision RiskProcedures Req'd

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - SOUTHERN UTE 005A - ST00 - ST00											Offset Site Error: 5.0 usft		
Survey Program: 5719-3_Blind											Offset Well Error: 1.0 usft		
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,850.0	2,865.7	2,917.7	2,917.7	73.1	2,037.0	-96.66	-429.1	5,133.6	1,424.3	-634.8	2,059.09	0.692	Collision RiskProcedures Req'd
5,875.0	2,865.4	2,917.4	2,917.4	73.7	2,036.8	-96.54	-429.1	5,133.6	1,399.5	-659.6	2,059.01	0.680	Collision RiskProcedures Req'd
5,900.0	2,865.1	2,917.1	2,917.1	74.2	2,036.6	-96.43	-429.1	5,133.6	1,374.6	-684.4	2,058.93	0.668	Collision RiskProcedures Req'd
5,925.0	2,864.8	2,916.8	2,916.8	74.8	2,036.4	-96.31	-429.1	5,133.6	1,349.7	-709.1	2,058.86	0.656	Collision RiskProcedures Req'd
5,950.0	2,864.5	2,916.5	2,916.5	75.4	2,036.2	-96.19	-429.1	5,133.6	1,324.9	-733.9	2,058.79	0.644	Collision RiskProcedures Req'd
5,975.0	2,864.3	2,916.3	2,916.3	75.9	2,036.0	-96.08	-429.1	5,133.6	1,300.0	-758.7	2,058.73	0.631	Collision RiskProcedures Req'd
6,000.0	2,864.0	2,916.0	2,916.0	76.5	2,035.8	-95.96	-429.1	5,133.6	1,275.1	-783.5	2,058.67	0.619	Collision RiskProcedures Req'd
6,025.0	2,863.7	2,915.7	2,915.7	77.1	2,035.6	-95.84	-429.1	5,133.6	1,250.3	-808.3	2,058.62	0.607	Collision RiskProcedures Req'd
6,050.0	2,863.4	2,915.4	2,915.4	77.7	2,035.4	-95.73	-429.1	5,133.6	1,225.5	-833.1	2,058.58	0.595	Collision RiskProcedures Req'd
6,075.0	2,863.1	2,915.1	2,915.1	78.2	2,035.2	-95.61	-429.1	5,133.6	1,200.6	-857.9	2,058.55	0.583	Collision RiskProcedures Req'd
6,100.0	2,862.8	2,914.8	2,914.8	78.8	2,035.0	-95.49	-429.1	5,133.6	1,175.8	-882.7	2,058.52	0.571	Collision RiskProcedures Req'd
6,125.0	2,862.5	2,914.5	2,914.5	79.4	2,034.8	-95.38	-429.1	5,133.6	1,151.0	-907.5	2,058.51	0.559	Collision RiskProcedures Req'd
6,150.0	2,862.2	2,914.2	2,914.2	80.0	2,034.6	-95.26	-429.1	5,133.6	1,126.2	-932.3	2,058.50	0.547	Collision RiskProcedures Req'd
6,175.0	2,862.0	2,914.0	2,914.0	80.6	2,034.4	-95.14	-429.1	5,133.6	1,101.4	-957.1	2,058.50	0.535	Collision RiskProcedures Req'd
6,200.0	2,861.7	2,913.7	2,913.7	81.1	2,034.2	-95.02	-429.1	5,133.6	1,076.6	-981.9	2,058.52	0.523	Collision RiskProcedures Req'd
6,225.0	2,861.4	2,913.4	2,913.4	81.7	2,034.0	-94.91	-429.1	5,133.6	1,051.8	-1,006.7	2,058.54	0.511	Collision RiskProcedures Req'd
6,250.0	2,861.1	2,913.1	2,913.1	82.3	2,033.8	-94.79	-429.1	5,133.6	1,027.0	-1,031.5	2,058.58	0.499	Collision RiskProcedures Req'd
6,275.0	2,860.8	2,912.8	2,912.8	82.9	2,033.6	-94.67	-429.1	5,133.6	1,002.3	-1,056.4	2,058.63	0.487	Collision RiskProcedures Req'd
6,300.0	2,860.5	2,912.5	2,912.5	83.5	2,033.4	-94.56	-429.1	5,133.6	977.5	-1,081.2	2,058.70	0.475	Collision RiskProcedures Req'd
6,325.0	2,860.2	2,912.2	2,912.2	84.0	2,033.2	-94.44	-429.1	5,133.6	952.8	-1,106.0	2,058.79	0.463	Collision RiskProcedures Req'd
6,350.0	2,859.9	2,911.9	2,911.9	84.6	2,033.0	-94.32	-429.1	5,133.6	928.1	-1,130.8	2,058.89	0.451	Collision RiskProcedures Req'd
6,375.0	2,859.7	2,911.7	2,911.7	85.2	2,032.8	-94.20	-429.1	5,133.6	903.4	-1,155.6	2,059.01	0.439	Collision RiskProcedures Req'd
6,400.0	2,859.4	2,911.4	2,911.4	85.8	2,032.6	-94.09	-429.1	5,133.6	878.7	-1,180.5	2,059.15	0.427	Collision RiskProcedures Req'd
6,425.0	2,859.1	2,911.1	2,911.1	86.4	2,032.4	-93.97	-429.1	5,133.6	854.0	-1,205.3	2,059.32	0.415	Collision RiskProcedures Req'd
6,450.0	2,858.8	2,910.8	2,910.8	86.9	2,032.2	-93.85	-429.1	5,133.6	829.4	-1,230.2	2,059.51	0.403	Collision RiskProcedures Req'd
6,475.0	2,858.5	2,910.5	2,910.5	87.5	2,032.0	-93.73	-429.1	5,133.6	804.7	-1,255.0	2,059.73	0.391	Collision RiskProcedures Req'd
6,500.0	2,858.2	2,910.2	2,910.2	88.1	2,031.8	-93.62	-429.1	5,133.6	780.1	-1,279.9	2,059.98	0.379	Collision RiskProcedures Req'd
6,525.0	2,857.9	2,909.9	2,909.9	88.7	2,031.6	-93.50	-429.1	5,133.6	755.5	-1,304.7	2,060.26	0.367	Collision RiskProcedures Req'd
6,550.0	2,857.6	2,909.6	2,909.6	89.3	2,031.4	-93.38	-429.1	5,133.6	731.0	-1,329.6	2,060.58	0.355	Collision RiskProcedures Req'd
6,575.0	2,857.4	2,909.4	2,909.4	89.9	2,031.2	-93.26	-429.1	5,133.6	706.5	-1,354.5	2,060.94	0.343	Collision RiskProcedures Req'd
6,600.0	2,857.1	2,909.1	2,909.1	90.4	2,031.0	-93.15	-429.1	5,133.6	682.0	-1,379.4	2,061.34	0.331	Collision RiskProcedures Req'd
6,625.0	2,856.8	2,908.8	2,908.8	91.0	2,030.8	-93.03	-429.1	5,133.6	657.5	-1,404.3	2,061.80	0.319	Collision RiskProcedures Req'd
6,650.0	2,856.5	2,908.5	2,908.5	91.6	2,030.6	-92.91	-429.1	5,133.6	633.1	-1,429.2	2,062.31	0.307	Collision RiskProcedures Req'd
6,675.0	2,856.2	2,908.2	2,908.2	92.2	2,030.4	-92.79	-429.1	5,133.6	608.8	-1,454.1	2,062.89	0.295	Collision RiskProcedures Req'd
6,700.0	2,855.9	2,907.9	2,907.9	92.8	2,030.2	-92.68	-429.1	5,133.6	584.5	-1,479.1	2,063.53	0.283	Collision RiskProcedures Req'd
6,725.0	2,855.6	2,907.6	2,907.6	93.4	2,030.0	-92.56	-429.1	5,133.6	560.2	-1,504.0	2,064.26	0.271	Collision RiskProcedures Req'd
6,750.0	2,855.3	2,907.3	2,907.3	94.0	2,029.8	-92.44	-429.1	5,133.6	536.0	-1,529.0	2,065.08	0.260	Collision RiskProcedures Req'd
6,775.0	2,855.1	2,907.1	2,907.1	94.5	2,029.6	-92.32	-429.1	5,133.6	512.0	-1,554.0	2,066.00	0.248	Collision RiskProcedures Req'd
6,800.0	2,854.8	2,906.8	2,906.8	95.1	2,029.4	-92.21	-429.1	5,133.6	488.0	-1,579.1	2,067.03	0.236	Collision RiskProcedures Req'd
6,825.0	2,854.5	2,906.5	2,906.5	95.7	2,029.2	-92.09	-429.1	5,133.6	464.1	-1,604.2	2,068.21	0.224	Collision RiskProcedures Req'd
6,850.0	2,854.2	2,906.2	2,906.2	96.3	2,029.0	-91.97	-429.1	5,133.6	440.3	-1,629.3	2,069.53	0.213	Collision RiskProcedures Req'd
6,875.0	2,853.9	2,905.9	2,905.9	96.9	2,028.8	-91.85	-429.1	5,133.6	416.7	-1,654.4	2,071.04	0.201	Collision RiskProcedures Req'd
6,900.0	2,853.6	2,905.6	2,905.6	97.5	2,028.6	-91.73	-429.1	5,133.6	393.2	-1,679.6	2,072.75	0.190	Collision RiskProcedures Req'd
6,925.0	2,853.3	2,905.3	2,905.3	98.1	2,028.4	-91.62	-429.1	5,133.6	369.9	-1,704.8	2,074.70	0.178	Collision RiskProcedures Req'd
6,950.0	2,853.0	2,905.0	2,905.0	98.7	2,028.2	-91.50	-429.1	5,133.6	346.9	-1,730.0	2,076.93	0.167	Collision RiskProcedures Req'd
6,975.0	2,852.8	2,904.8	2,904.8	99.2	2,028.0	-91.38	-429.1	5,133.6	324.2	-1,755.3	2,079.49	0.156	Collision RiskProcedures Req'd
7,000.0	2,852.5	2,904.5	2,904.5	99.8	2,027.8	-91.26	-429.1	5,133.6	301.8	-1,780.6	2,082.43	0.145	Collision RiskProcedures Req'd
7,025.0	2,852.2	2,904.2	2,904.2	100.4	2,027.6	-91.14	-429.1	5,133.6	279.9	-1,805.9	2,085.82	0.134	Collision RiskProcedures Req'd
7,050.0	2,851.9	2,903.9	2,903.9	101.0	2,027.4	-91.03	-429.1	5,133.6	258.5	-1,831.2	2,089.72	0.124	Collision RiskProcedures Req'd
7,075.0	2,851.6	2,903.6	2,903.6	101.6	2,027.2	-90.91	-429.1	5,133.6	237.9	-1,856.3	2,094.22	0.114	Collision RiskProcedures Req'd
7,100.0	2,851.3	2,903.3	2,903.3	102.2	2,027.0	-90.79	-429.1	5,133.6	218.2	-1,881.2	2,099.35	0.104	Collision RiskProcedures Req'd
7,125.0	2,851.0	2,903.0	2,903.0	102.8	2,026.8	-90.67	-429.1	5,133.6	199.6	-1,906.6	2,105.15	0.095	Collision RiskProcedures Req'd

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - SOUTHERN UTE 005A - ST00 - ST00												Offset Site Error:	5.0 usft
Survey Program: 5719-3_Blind												Offset Well Error:	1.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
7,150.0	2,850.7	2,902.7	2,902.7	103.4	2,026.6	-90.55	-429.1	5,133.6	182.6	-1,928.9	2,111.53	0.086	Collision RiskProcedures Req'd
7,175.0	2,850.4	2,902.4	2,902.4	104.0	2,026.4	-90.44	-429.1	5,133.6	167.6	-1,950.7	2,118.24	0.079	Collision RiskProcedures Req'd
7,200.0	2,850.2	2,902.2	2,902.2	104.6	2,026.2	-90.32	-429.1	5,133.6	155.2	-1,969.6	2,124.74	0.073	Collision RiskProcedures Req'd, CC, E

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - Southern Ute 705H - Lateral No.1 - WP2.1													Offset Site Error:	5.0 usft	
Survey Program: 0-3_MWD+HRGM, 3350-3_MWD+HRGM										Rule Assigned:			Offset Well Error:		1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre (+N/-S (usft), +E/-W (usft))		Distance (Between Centres (usft), Between Ellipses (usft))		Minimum Separation (usft)	Separation Factor	Warning		
3,302.7	2,802.8	3,302.7	2,802.8	0.0	0.0	86.21	-502.8	1,184.6	0.0	-2.3	2.29	0.014	Collision Risk	Procedures Req'd	
3,325.0	2,812.5	3,324.8	2,812.4	0.4	0.5	91.30	-510.6	1,202.9	2.6	-0.4	3.01	0.856	Collision Risk	Procedures Req'd	
3,344.0	2,820.5	3,344.0	2,820.5	0.6	0.8	-170.49	-517.4	1,218.9	0.1	-2.7	2.78	0.030	Collision Risk	Procedures Req'd	
3,344.4	2,820.6	3,344.4	2,820.7	0.6	0.9	126.01	-517.5	1,219.3	0.2	-3.4	3.56	0.049	Collision Risk	Procedures Req'd	
3,350.0	2,822.9	3,349.6	2,822.9	0.7	1.0	98.48	-519.4	1,223.6	2.1	-1.7	3.79	0.562	Collision Risk	Procedures Req'd	
3,375.0	2,832.9	3,373.0	2,832.6	0.8	1.3	97.57	-527.0	1,243.4	10.3	6.0	4.27	2.417			
3,400.0	2,842.0	3,393.3	2,840.9	1.0	1.5	98.46	-535.0	1,260.2	20.4	15.7	4.68	4.360			
3,425.0	2,850.4	3,415.0	2,849.3	1.2	1.7	98.73	-545.6	1,277.2	32.8	27.8	5.02	6.538			
3,450.0	2,858.0	3,436.5	2,856.8	1.4	1.8	98.27	-556.3	1,294.3	45.3	40.0	5.36	8.456			
3,475.0	2,864.9	3,458.0	2,863.6	1.6	2.0	97.56	-567.1	1,311.6	58.0	52.2	5.74	10.108			
3,500.0	2,870.9	3,479.5	2,869.7	1.9	2.2	96.72	-578.0	1,329.0	70.7	64.6	6.13	11.547			
3,525.0	2,876.2	3,500.9	2,874.9	2.1	2.4	95.81	-589.0	1,346.6	83.6	77.0	6.54	12.785			
3,550.0	2,880.6	3,522.2	2,879.5	2.4	2.6	94.87	-600.1	1,364.2	96.5	89.5	6.97	13.846			
3,575.0	2,884.3	3,543.5	2,883.2	2.7	2.8	93.90	-611.3	1,382.0	109.4	102.0	7.42	14.753			
3,600.0	2,887.1	3,564.8	2,886.2	3.0	3.0	92.91	-622.5	1,399.9	122.4	114.5	7.88	15.533	CC, ES		
3,625.0	2,889.1	3,586.1	2,888.4	3.3	3.2	91.92	-633.7	1,417.8	135.4	127.0	8.37	16.185			
3,650.0	2,890.3	3,607.4	2,889.9	3.6	3.4	90.92	-645.0	1,435.8	148.4	139.6	8.86	16.754			
3,675.0	2,890.7	3,628.7	2,890.6	3.9	3.7	89.92	-656.3	1,453.8	161.5	152.1	9.38	17.221			
3,683.0	2,890.6	3,635.5	2,890.7	4.0	3.8	89.60	-660.0	1,459.5	165.7	156.1	9.54	17.359			
3,700.0	2,890.4	3,650.0	2,890.6	4.3	3.9	89.66	-667.7	1,471.8	174.5	164.6	9.91	17.615			
3,725.0	2,890.2	3,671.3	2,890.5	4.6	4.2	89.72	-679.1	1,489.9	187.5	177.1	10.46	17.920			
3,750.0	2,889.9	3,692.7	2,890.4	5.0	4.4	89.77	-690.4	1,507.9	200.5	189.5	11.02	18.193			
3,775.0	2,889.6	3,714.0	2,890.3	5.3	4.7	89.81	-701.8	1,526.0	213.6	202.0	11.60	18.416			
3,800.0	2,889.3	3,735.3	2,890.1	5.7	5.0	89.85	-713.2	1,544.1	226.6	214.4	12.18	18.606			
3,825.0	2,889.0	3,756.7	2,890.0	6.1	5.2	89.89	-724.5	1,562.1	239.6	226.8	12.78	18.743			
3,850.0	2,888.7	3,778.0	2,889.9	6.4	5.5	89.92	-735.9	1,580.2	252.6	239.2	13.39	18.866			
3,875.0	2,888.4	3,799.4	2,889.8	6.8	5.8	89.95	-747.2	1,598.2	265.7	251.7	14.00	18.978			
3,900.0	2,888.1	3,820.7	2,889.7	7.2	6.1	89.97	-758.6	1,616.3	278.7	264.1	14.63	19.051			
3,925.0	2,887.8	3,842.0	2,889.6	7.6	6.4	90.00	-770.0	1,634.4	291.7	276.4	15.28	19.089			
3,950.0	2,887.6	3,863.4	2,889.5	8.0	6.7	90.02	-781.3	1,652.4	304.7	288.8	15.93	19.124			
3,975.0	2,887.3	3,884.7	2,889.4	8.5	7.0	90.04	-792.7	1,670.5	317.8	301.2	16.59	19.156			
4,000.0	2,887.0	3,906.1	2,889.2	8.9	7.3	90.06	-804.1	1,688.5	330.8	313.5	17.25	19.178			
4,025.0	2,886.7	3,927.4	2,889.1	9.3	7.6	90.07	-815.4	1,706.6	343.8	325.9	17.94	19.163			
4,050.0	2,886.4	3,948.7	2,889.0	9.7	7.9	90.09	-826.8	1,724.7	356.8	338.2	18.63	19.149			
4,075.0	2,886.1	3,970.1	2,888.9	10.2	8.3	90.10	-838.2	1,742.7	369.8	350.5	19.33	19.136			
4,100.0	2,885.8	3,991.4	2,888.8	10.6	8.6	90.12	-849.5	1,760.8	382.9	362.9	20.02	19.124			
4,125.0	2,885.5	4,012.8	2,888.7	11.1	8.9	90.13	-860.9	1,778.9	395.9	375.2	20.74	19.087			
4,150.0	2,885.3	4,034.1	2,888.6	11.5	9.3	90.14	-872.3	1,796.9	408.9	387.4	21.47	19.046			
4,175.0	2,885.0	4,055.4	2,888.5	12.0	9.6	90.15	-883.6	1,815.0	421.9	399.7	22.20	19.008			
4,200.0	2,884.7	4,076.8	2,888.3	12.4	9.9	90.16	-895.0	1,833.0	435.0	412.0	22.93	18.972			
4,225.0	2,884.4	4,098.1	2,888.2	12.9	10.3	90.17	-906.4	1,851.1	448.0	424.3	23.67	18.927			
4,250.0	2,884.1	4,119.5	2,888.1	13.4	10.6	90.18	-917.7	1,869.2	461.0	436.6	24.43	18.874			
4,275.0	2,883.8	4,140.8	2,888.0	13.8	11.0	90.19	-929.1	1,887.2	474.0	448.8	25.18	18.822			
4,300.0	2,883.5	4,162.1	2,887.9	14.3	11.3	90.20	-940.4	1,905.3	487.1	461.1	25.94	18.774			
4,325.0	2,883.2	4,183.5	2,887.8	14.8	11.7	90.21	-951.8	1,923.4	500.1	473.4	26.71	18.720			
4,350.0	2,883.0	4,204.8	2,887.7	15.3	12.1	90.21	-963.2	1,941.4	513.1	485.6	27.49	18.667			
4,375.0	2,882.7	4,226.2	2,887.6	15.8	12.4	90.22	-974.5	1,959.5	526.1	497.9	28.27	18.609			
4,400.0	2,882.4	4,247.5	2,887.4	16.3	12.8	90.23	-985.9	1,977.5	539.2	510.1	29.06	18.555			
4,425.0	2,882.1	4,268.8	2,887.3	16.8	13.2	90.23	-997.3	1,995.6	552.2	522.3	29.85	18.497			
4,450.0	2,881.8	4,290.2	2,887.2	17.3	13.5	90.24	-1,008.6	2,013.7	565.2	534.6	30.65	18.442			
4,475.0	2,881.5	4,311.5	2,887.1	17.8	13.9	90.25	-1,020.0	2,031.7	578.2	546.8	31.45	18.386			
4,500.0	2,881.2	4,332.9	2,887.0	18.2	14.3	90.25	-1,031.4	2,049.8	591.2	559.0	32.26	18.329			

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - Southern Ute 705H - Lateral No.1 - WP2.1													Offset Site Error:	5.0 usft	
Survey Program: 0-3_MWD+HRGM, 3350-3_MWD+HRGM											Rule Assigned:		Offset Well Error:		1.0 usft
Measured Reference Depth (usft)	Vertical Depth (usft)	Measured Offset Depth (usft)	Vertical Offset Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
4,525.0	2,880.9	4,354.2	2,886.9	18.8	14.7	90.26	-1,042.7	2,067.8	604.3	571.2	33.07	18.270			
4,550.0	2,880.7	4,375.5	2,886.8	19.3	15.1	90.26	-1,054.1	2,085.9	617.3	583.4	33.89	18.214			
4,575.0	2,880.4	4,396.9	2,886.7	19.8	15.4	90.27	-1,065.5	2,104.0	630.3	595.6	34.71	18.161			
4,600.0	2,880.1	4,418.2	2,886.5	20.3	15.8	90.27	-1,076.8	2,122.0	643.3	607.8	35.53	18.105			
4,625.0	2,879.8	4,439.6	2,886.4	20.8	16.2	90.28	-1,088.2	2,140.1	656.4	620.0	36.37	18.047			
4,650.0	2,879.5	4,460.9	2,886.3	21.3	16.6	90.28	-1,099.6	2,158.2	669.4	632.2	37.20	17.992			
4,675.0	2,879.2	4,482.2	2,886.2	21.8	17.0	90.29	-1,110.9	2,176.2	682.4	644.4	38.04	17.939			
4,700.0	2,878.9	4,503.6	2,886.1	22.4	17.4	90.29	-1,122.3	2,194.3	695.4	656.6	38.88	17.888			
4,725.0	2,878.6	4,524.9	2,886.0	22.9	17.8	90.29	-1,133.6	2,212.3	708.5	668.7	39.73	17.832			
4,750.0	2,878.4	4,546.3	2,885.9	23.4	18.2	90.30	-1,145.0	2,230.4	721.5	680.9	40.58	17.779			
4,775.0	2,878.1	4,567.6	2,885.8	23.9	18.6	90.30	-1,156.4	2,248.5	734.5	693.1	41.43	17.728			
4,800.0	2,877.8	4,588.9	2,885.6	24.5	19.0	90.30	-1,167.7	2,266.5	747.5	705.2	42.28	17.679			
4,825.0	2,877.5	4,610.3	2,885.5	25.0	19.4	90.31	-1,179.1	2,284.6	760.6	717.4	43.15	17.627			
4,850.0	2,877.2	4,631.6	2,885.4	25.5	19.8	90.31	-1,190.5	2,302.6	773.6	729.6	44.01	17.576			
4,875.0	2,876.9	4,653.0	2,885.3	26.1	20.2	90.31	-1,201.8	2,320.7	786.6	741.7	44.88	17.527			
4,900.0	2,876.6	4,674.3	2,885.2	26.6	20.6	90.32	-1,213.2	2,338.8	799.6	753.9	45.74	17.480			
4,925.0	2,876.3	4,695.6	2,885.1	27.1	21.1	90.32	-1,224.6	2,356.8	812.6	766.0	46.62	17.432			
4,950.0	2,876.1	4,717.0	2,885.0	27.7	21.5	90.32	-1,235.9	2,374.9	825.7	778.2	47.49	17.385			
4,975.0	2,875.8	4,738.3	2,884.9	28.2	21.9	90.33	-1,247.3	2,393.0	838.7	790.3	48.37	17.338			
5,000.0	2,875.5	4,759.7	2,884.8	28.8	22.3	90.33	-1,258.7	2,411.0	851.7	802.5	49.25	17.293			
5,025.0	2,875.2	4,781.0	2,884.6	29.3	22.7	90.33	-1,270.0	2,429.1	864.7	814.6	50.14	17.248			
5,050.0	2,874.9	4,802.3	2,884.5	29.9	23.1	90.33	-1,281.4	2,447.1	877.8	826.7	51.02	17.204			
5,075.0	2,874.6	4,823.7	2,884.4	30.4	23.6	90.34	-1,292.8	2,465.2	890.8	838.9	51.91	17.160			
5,100.0	2,874.3	4,845.0	2,884.3	30.9	24.0	90.34	-1,304.1	2,483.3	903.8	851.0	52.80	17.117			
5,125.0	2,874.0	4,866.4	2,884.2	31.5	24.4	90.34	-1,315.5	2,501.3	916.8	863.1	53.70	17.075			
5,150.0	2,873.8	4,887.7	2,884.1	32.1	24.8	90.34	-1,326.8	2,519.4	929.9	875.3	54.59	17.033			
5,175.0	2,873.5	4,909.0	2,884.0	32.6	25.3	90.35	-1,338.2	2,537.4	942.9	887.4	55.49	16.993			
5,200.0	2,873.2	4,930.4	2,883.9	33.2	25.7	90.35	-1,349.6	2,555.5	955.9	899.5	56.39	16.952			
5,225.0	2,872.9	4,951.7	2,883.7	33.7	26.1	90.35	-1,360.9	2,573.6	968.9	911.6	57.29	16.912			
5,250.0	2,872.6	4,973.1	2,883.6	34.3	26.6	90.35	-1,372.3	2,591.6	981.9	923.8	58.20	16.873			
5,275.0	2,872.3	4,994.4	2,883.5	34.8	27.0	90.35	-1,383.7	2,609.7	995.0	935.9	59.10	16.835			
5,300.0	2,872.0	5,015.7	2,883.4	35.4	27.4	90.36	-1,395.0	2,627.8	1,008.0	948.0	60.01	16.798			
5,325.0	2,871.7	5,037.1	2,883.3	35.9	27.9	90.36	-1,406.4	2,645.8	1,021.0	960.1	60.92	16.760			
5,350.0	2,871.5	5,058.4	2,883.2	36.5	28.3	90.36	-1,417.8	2,663.9	1,034.0	972.2	61.83	16.723			
5,375.0	2,871.2	5,079.8	2,883.1	37.1	28.7	90.36	-1,429.1	2,681.9	1,047.1	984.3	62.75	16.687			
5,400.0	2,870.9	5,101.1	2,883.0	37.6	29.2	90.36	-1,440.5	2,700.0	1,060.1	996.4	63.66	16.653			
5,425.0	2,870.6	5,132.2	2,882.8	38.2	29.8	90.36	-1,457.0	2,726.3	1,073.1	1,008.1	64.95	16.522			
5,450.0	2,870.3	5,195.9	2,882.4	38.7	31.1	90.37	-1,489.4	2,781.2	1,085.5	1,018.1	67.42	16.100			
5,475.0	2,870.0	5,262.4	2,882.1	39.3	32.5	90.38	-1,520.9	2,839.8	1,097.0	1,027.1	69.91	15.691			
5,500.0	2,869.7	5,276.4	2,882.0	39.9	32.8	90.38	-1,526.7	2,852.5	1,107.5	1,036.9	70.61	15.686			
5,525.0	2,869.4	5,403.7	2,881.3	40.4	35.5	90.40	-1,579.7	2,968.2	1,117.3	1,042.4	74.85	14.927			
5,550.0	2,869.1	5,478.3	2,880.9	41.0	37.1	90.41	-1,606.3	3,037.9	1,125.9	1,048.6	77.26	14.573			
5,575.0	2,868.9	5,555.2	2,880.5	41.6	38.7	90.42	-1,630.3	3,111.0	1,133.3	1,053.8	79.58	14.242			
5,600.0	2,868.6	5,575.6	2,880.4	42.1	39.1	90.43	-1,635.5	3,130.7	1,139.6	1,059.0	80.56	14.145			
5,625.0	2,868.3	5,715.3	2,879.6	42.7	42.1	90.46	-1,669.1	3,266.2	1,144.8	1,061.0	83.86	13.651			
5,650.0	2,868.0	5,797.7	2,879.2	43.3	43.8	90.47	-1,683.2	3,347.4	1,148.7	1,063.0	85.77	13.393			
5,675.0	2,867.7	5,881.3	2,878.7	43.8	45.5	90.50	-1,693.2	3,430.4	1,151.4	1,063.9	87.49	13.161			
5,700.0	2,867.4	5,965.6	2,878.3	44.4	47.2	90.52	-1,699.0	3,514.4	1,152.8	1,063.8	88.99	12.955			
5,725.0	2,867.1	6,050.1	2,877.8	45.0	48.9	90.55	-1,700.5	3,598.9	1,152.9	1,062.6	90.26	12.773			
5,750.0	2,866.8	6,072.1	2,877.7	45.6	49.4	90.55	-1,700.4	3,620.9	1,152.4	1,061.0	91.39	12.610			
5,775.0	2,866.6	6,097.1	2,877.6	46.1	49.8	90.56	-1,700.3	3,645.9	1,151.9	1,059.4	92.52	12.451			
5,800.0	2,866.3	6,122.1	2,877.5	46.7	50.3	90.57	-1,700.1	3,670.9	1,151.5	1,057.8	93.65	12.296			

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - Southern Ute 705H - Lateral No.1 - WP2.1													Offset Site Error:	5.0 usft
Survey Program: 0-3_MWD+HRGM, 3350-3_MWD+HRGM											Rule Assigned:		Offset Well Error:	1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,825.0	2,866.0	6,147.1	2,877.3	47.3	50.8	90.58	-1,700.0	3,695.9	1,151.0	1,056.2	94.78	12.143		
5,850.0	2,865.7	6,172.1	2,877.2	47.8	51.4	90.59	-1,699.9	3,720.9	1,150.5	1,054.6	95.92	11.995		
5,875.0	2,865.4	6,197.1	2,877.1	48.4	51.9	90.59	-1,699.7	3,745.9	1,150.0	1,053.0	97.05	11.850		
5,900.0	2,865.1	6,222.1	2,876.9	49.0	52.4	90.60	-1,699.6	3,770.9	1,149.5	1,051.4	98.19	11.708		
5,925.0	2,864.8	6,247.0	2,876.8	49.6	52.9	90.61	-1,699.4	3,795.9	1,149.1	1,049.7	99.33	11.568		
5,950.0	2,864.5	6,272.0	2,876.7	50.1	53.4	90.62	-1,699.3	3,820.9	1,148.6	1,048.1	100.47	11.433		
5,975.0	2,864.3	6,297.0	2,876.5	50.7	53.9	90.63	-1,699.2	3,845.9	1,148.1	1,046.5	101.61	11.300		
6,000.0	2,864.0	6,322.0	2,876.4	51.3	54.4	90.63	-1,699.0	3,870.9	1,147.6	1,044.9	102.75	11.169		
6,025.0	2,863.7	6,347.0	2,876.3	51.9	54.9	90.64	-1,698.9	3,895.8	1,147.1	1,043.3	103.89	11.042		
6,050.0	2,863.4	6,372.0	2,876.1	52.5	55.4	90.65	-1,698.7	3,920.8	1,146.7	1,041.6	105.04	10.917		
6,075.0	2,863.1	6,397.0	2,876.0	53.0	56.0	90.66	-1,698.6	3,945.8	1,146.2	1,040.0	106.18	10.795		
6,100.0	2,862.8	6,422.0	2,875.9	53.6	56.5	90.67	-1,698.5	3,970.8	1,145.7	1,038.4	107.33	10.675		
6,125.0	2,862.5	6,447.0	2,875.8	54.2	57.0	90.67	-1,698.3	3,995.8	1,145.2	1,036.7	108.47	10.558		
6,150.0	2,862.2	6,472.0	2,875.6	54.8	57.5	90.68	-1,698.2	4,020.8	1,144.7	1,035.1	109.62	10.443		
6,175.0	2,862.0	6,497.0	2,875.5	55.4	58.0	90.69	-1,698.0	4,045.8	1,144.3	1,033.5	110.77	10.330		
6,200.0	2,861.7	6,522.0	2,875.4	55.9	58.6	90.70	-1,697.9	4,070.8	1,143.8	1,031.9	111.92	10.219		
6,225.0	2,861.4	6,547.0	2,875.2	56.5	59.1	90.71	-1,697.8	4,095.8	1,143.3	1,030.2	113.07	10.111		
6,250.0	2,861.1	6,572.0	2,875.1	57.1	59.6	90.72	-1,697.6	4,120.8	1,142.8	1,028.6	114.23	10.005		
6,275.0	2,860.8	6,597.0	2,875.0	57.7	60.1	90.72	-1,697.5	4,145.8	1,142.3	1,027.0	115.38	9.901		
6,300.0	2,860.5	6,622.0	2,874.8	58.3	60.7	90.73	-1,697.3	4,170.8	1,141.9	1,025.3	116.53	9.799		
6,325.0	2,860.2	6,647.0	2,874.7	58.8	61.2	90.74	-1,697.2	4,195.8	1,141.4	1,023.7	117.69	9.698		
6,350.0	2,859.9	6,672.0	2,874.6	59.4	61.7	90.75	-1,697.1	4,220.8	1,140.9	1,022.1	118.84	9.600		
6,375.0	2,859.7	6,697.0	2,874.4	60.0	62.3	90.76	-1,696.9	4,245.8	1,140.4	1,020.4	120.00	9.503		
6,400.0	2,859.4	6,721.9	2,874.3	60.6	62.8	90.76	-1,696.8	4,270.8	1,139.9	1,018.8	121.16	9.409		
6,425.0	2,859.1	6,746.9	2,874.2	61.2	63.3	90.77	-1,696.6	4,295.8	1,139.5	1,017.1	122.32	9.316		
6,450.0	2,858.8	6,771.9	2,874.1	61.8	63.9	90.78	-1,696.5	4,320.7	1,139.0	1,015.5	123.48	9.224		
6,475.0	2,858.5	6,796.9	2,873.9	62.3	64.4	90.79	-1,696.4	4,345.7	1,138.5	1,013.9	124.64	9.135		
6,500.0	2,858.2	6,821.9	2,873.8	62.9	65.0	90.80	-1,696.2	4,370.7	1,138.0	1,012.2	125.80	9.047		
6,525.0	2,857.9	6,846.9	2,873.7	63.5	65.5	90.81	-1,696.1	4,395.7	1,137.5	1,010.6	126.96	8.960		
6,550.0	2,857.6	6,871.9	2,873.5	64.1	66.0	90.81	-1,695.9	4,420.7	1,137.1	1,008.9	128.12	8.875		
6,575.0	2,857.4	6,896.9	2,873.4	64.7	66.6	90.82	-1,695.8	4,445.7	1,136.6	1,007.3	129.28	8.791		
6,600.0	2,857.1	6,921.9	2,873.3	65.3	67.1	90.83	-1,695.7	4,470.7	1,136.1	1,005.7	130.45	8.709		
6,625.0	2,856.8	6,946.9	2,873.1	65.9	67.7	90.84	-1,695.5	4,495.7	1,135.6	1,004.0	131.61	8.629		
6,650.0	2,856.5	6,971.9	2,873.0	66.5	68.2	90.85	-1,695.4	4,520.7	1,135.2	1,002.4	132.78	8.549		
6,675.0	2,856.2	6,996.9	2,872.9	67.0	68.8	90.85	-1,695.2	4,545.7	1,134.7	1,000.7	133.94	8.471		
6,700.0	2,855.9	7,021.9	2,872.7	67.6	69.3	90.86	-1,695.1	4,570.7	1,134.2	999.1	135.11	8.395		
6,725.0	2,855.6	7,046.9	2,872.6	68.2	69.9	90.87	-1,695.0	4,595.7	1,133.7	997.4	136.28	8.319		
6,750.0	2,855.3	7,071.9	2,872.5	68.8	70.4	90.88	-1,694.8	4,620.7	1,133.2	995.8	137.44	8.245		
6,775.0	2,855.1	7,096.9	2,872.4	69.4	71.0	90.89	-1,694.7	4,645.7	1,132.8	994.1	138.61	8.172		
6,800.0	2,854.8	7,121.9	2,872.2	70.0	71.5	90.90	-1,694.5	4,670.7	1,132.3	992.5	139.78	8.100		
6,825.0	2,854.5	7,146.9	2,872.1	70.6	72.1	90.90	-1,694.4	4,695.7	1,131.8	990.8	140.95	8.030		
6,850.0	2,854.2	7,171.9	2,872.0	71.2	72.6	90.91	-1,694.3	4,720.7	1,131.3	989.2	142.12	7.960		
6,875.0	2,853.9	7,196.9	2,871.8	71.7	73.2	90.92	-1,694.1	4,745.6	1,130.8	987.5	143.29	7.892		
6,900.0	2,853.6	7,221.8	2,871.7	72.3	73.7	90.93	-1,694.0	4,770.6	1,130.4	985.9	144.46	7.825		
6,925.0	2,853.3	7,246.8	2,871.6	72.9	74.3	90.94	-1,693.9	4,795.6	1,129.9	984.2	145.64	7.758		
6,950.0	2,853.0	7,271.8	2,871.4	73.5	74.8	90.95	-1,693.7	4,820.6	1,129.4	982.6	146.81	7.693		
6,975.0	2,852.8	7,296.8	2,871.3	74.1	75.4	90.95	-1,693.6	4,845.6	1,128.9	980.9	147.98	7.629		
7,000.0	2,852.5	7,321.8	2,871.2	74.7	75.9	90.96	-1,693.4	4,870.6	1,128.4	979.3	149.15	7.566		
7,025.0	2,852.2	7,346.8	2,871.0	75.3	76.5	90.97	-1,693.3	4,895.6	1,128.0	977.6	150.33	7.503		
7,050.0	2,851.9	7,371.8	2,870.9	75.9	77.1	90.98	-1,693.2	4,920.6	1,127.5	976.0	151.50	7.442		
7,075.0	2,851.6	7,396.8	2,870.8	76.5	77.6	90.99	-1,693.0	4,945.6	1,127.0	974.3	152.68	7.382		
7,100.0	2,851.3	7,421.8	2,870.6	77.1	78.2	91.00	-1,692.9	4,970.6	1,126.5	972.7	153.85	7.322		

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - Southern Ute 705H - Lateral No.1 - WP2.1												Offset Site Error: 5.0 usft	
Survey Program: 0-3_MWD+HRGM, 3350-3_MWD+HRGM										Rule Assigned:		Offset Well Error: 1.0 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
7,125.0	2,851.0	7,446.8	2,870.5	77.7	78.7	91.00	-1,692.7	4,995.6	1,126.0	971.0	155.03	7.263	
7,150.0	2,850.7	7,471.8	2,870.4	78.2	79.3	91.01	-1,692.6	5,020.6	1,125.6	969.4	156.20	7.206	
7,175.0	2,850.4	7,496.8	2,870.3	78.8	79.9	91.02	-1,692.5	5,045.6	1,125.1	967.7	157.38	7.149	
7,200.0	2,850.2	7,521.8	2,870.1	79.4	80.4	91.03	-1,692.3	5,070.6	1,124.6	966.1	158.56	7.093 SF	

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - Southern Ute 705H - Pilot Hole - WP2.1													Offset Site Error:	5.0 usft	
Survey Program: 0-3_MWD+HRGM											Rule Assigned:		Offset Well Error:		1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
3,302.7	2,802.8	3,302.7	2,802.8	0.0	0.0	86.21	-502.8	1,184.6	0.0	-2.3	2.29	0.014	Collision RiskProcedures Req'd		
3,325.0	2,812.5	3,324.8	2,812.4	0.4	0.5	91.30	-510.6	1,202.9	2.6	-0.4	3.01	0.856	Collision RiskProcedures Req'd		
3,344.0	2,820.5	3,344.0	2,820.5	0.6	0.8	-170.49	-517.4	1,218.9	0.1	-2.7	2.78	0.030	Collision RiskProcedures Req'd		
3,344.4	2,820.6	3,344.4	2,820.7	0.6	0.9	126.01	-517.5	1,219.3	0.2	-3.4	3.56	0.049	Collision RiskProcedures Req'd		
3,350.0	2,822.9	3,349.6	2,822.9	0.7	1.0	98.48	-519.4	1,223.6	2.1	-1.7	3.79	0.562	Collision RiskProcedures Req'd		
3,375.0	2,832.9	3,372.9	2,832.8	0.8	1.4	98.58	-527.6	1,243.1	11.1	6.7	4.42	2.507			
3,400.0	2,842.0	3,396.2	2,842.6	1.0	1.9	100.40	-535.9	1,262.5	20.1	15.1	5.05	3.991			
3,425.0	2,850.4	3,419.5	2,852.4	1.2	2.3	102.31	-544.1	1,281.9	29.3	23.7	5.69	5.160			
3,450.0	2,858.0	3,442.6	2,862.2	1.4	2.8	104.21	-552.3	1,301.1	38.7	32.4	6.32	6.133			
3,475.0	2,864.9	3,465.6	2,871.9	1.6	3.2	106.06	-560.4	1,320.3	48.4	41.4	6.95	6.958			
3,500.0	2,870.9	3,488.4	2,881.6	1.9	3.7	107.86	-568.5	1,339.4	58.3	50.7	7.57	7.701			
3,525.0	2,876.2	3,511.1	2,891.1	2.1	4.1	109.58	-576.6	1,358.3	68.5	60.3	8.18	8.371			
3,550.0	2,880.6	3,533.6	2,900.6	2.4	4.6	111.23	-584.5	1,377.0	79.1	70.3	8.77	9.011			
3,575.0	2,884.3	3,555.8	2,910.0	2.7	5.0	112.80	-592.4	1,395.6	90.0	80.6	9.36	9.617			
3,600.0	2,887.1	3,577.8	2,919.3	3.0	5.4	114.27	-600.2	1,414.0	101.3	91.4	9.91	10.222	CC, ES, SF		
3,625.0	2,889.1	3,599.5	2,928.5	3.3	5.9	115.65	-607.9	1,432.1	113.0	102.6	10.45	10.817			
3,650.0	2,890.3	3,621.0	2,937.6	3.6	6.3	116.94	-615.5	1,450.0	125.2	114.2	10.96	11.423			
3,675.0	2,890.7	3,642.1	2,946.5	3.9	6.7	118.14	-623.0	1,467.6	137.8	126.4	11.45	12.034			
3,683.0	2,890.6	3,648.8	2,949.3	4.0	6.9	118.50	-625.3	1,473.2	142.0	130.4	11.60	12.234			
3,700.0	2,890.4	3,663.0	2,955.3	4.3	7.1	119.87	-630.4	1,485.0	150.8	138.9	11.92	12.649			
3,725.0	2,890.2	3,678.8	2,962.0	4.6	7.4	121.22	-635.9	1,498.2	164.0	151.8	12.27	13.364			
3,750.0	2,889.9	3,678.8	2,962.0	5.0	7.4	121.22	-635.9	1,498.2	179.1	167.0	12.13	14.763			
3,775.0	2,889.6	3,678.8	2,962.0	5.3	7.4	121.22	-635.9	1,498.2	196.2	184.3	11.91	16.478			
3,800.0	2,889.3	3,678.8	2,962.0	5.7	7.4	121.22	-635.9	1,498.2	214.8	203.2	11.65	18.447			
3,825.0	2,889.0	3,678.8	2,962.0	6.1	7.4	121.22	-635.9	1,498.2	234.7	223.3	11.39	20.596			
3,850.0	2,888.7	3,678.8	2,962.0	6.4	7.4	121.22	-635.9	1,498.2	255.4	244.3	11.15	22.911			
3,875.0	2,888.4	3,678.8	2,962.0	6.8	7.4	121.22	-635.9	1,498.2	276.9	265.9	10.92	25.361			
3,900.0	2,888.1	3,678.8	2,962.0	7.2	7.4	121.22	-635.9	1,498.2	298.9	288.1	10.70	27.923			
3,925.0	2,887.8	3,678.8	2,962.0	7.6	7.4	121.22	-635.9	1,498.2	321.3	310.8	10.51	30.556			
3,950.0	2,887.6	3,678.8	2,962.0	8.0	7.4	121.22	-635.9	1,498.2	344.1	333.7	10.34	33.266			
3,975.0	2,887.3	3,678.8	2,962.0	8.5	7.4	121.22	-635.9	1,498.2	367.2	357.0	10.19	36.043			
4,000.0	2,887.0	3,678.8	2,962.0	8.9	7.4	121.22	-635.9	1,498.2	390.5	380.4	10.04	38.876			
4,025.0	2,886.7	3,678.8	2,962.0	9.3	7.4	121.22	-635.9	1,498.2	414.0	404.1	9.92	41.736			
4,050.0	2,886.4	3,678.8	2,962.0	9.7	7.4	121.22	-635.9	1,498.2	437.7	427.9	9.81	44.635			
4,075.0	2,886.1	3,678.8	2,962.0	10.2	7.4	121.22	-635.9	1,498.2	461.5	451.8	9.70	47.571			
4,100.0	2,885.8	3,678.8	2,962.0	10.6	7.4	121.22	-635.9	1,498.2	485.4	475.8	9.61	50.536			
4,125.0	2,885.5	3,678.8	2,962.0	11.1	7.4	121.22	-635.9	1,498.2	509.5	499.9	9.52	53.508			
4,150.0	2,885.3	3,678.8	2,962.0	11.5	7.4	121.22	-635.9	1,498.2	533.6	524.1	9.44	56.503			
4,175.0	2,885.0	3,678.8	2,962.0	12.0	7.4	121.22	-635.9	1,498.2	557.8	548.4	9.37	59.518			
4,200.0	2,884.7	3,678.8	2,962.0	12.4	7.4	121.22	-635.9	1,498.2	582.1	572.8	9.31	62.550			
4,225.0	2,884.4	3,678.8	2,962.0	12.9	7.4	121.22	-635.9	1,498.2	606.4	597.1	9.25	65.579			
4,250.0	2,884.1	3,678.8	2,962.0	13.4	7.4	121.22	-635.9	1,498.2	630.8	621.6	9.19	68.622			
4,275.0	2,883.8	3,678.8	2,962.0	13.8	7.4	121.22	-635.9	1,498.2	655.2	646.1	9.14	71.676			
4,300.0	2,883.5	3,678.8	2,962.0	14.3	7.4	121.22	-635.9	1,498.2	679.7	670.6	9.09	74.740			
4,325.0	2,883.2	3,678.8	2,962.0	14.8	7.4	121.22	-635.9	1,498.2	704.2	695.1	9.05	77.797			
4,350.0	2,883.0	3,678.8	2,962.0	15.3	7.4	121.22	-635.9	1,498.2	728.7	719.7	9.01	80.862			
4,375.0	2,882.7	3,678.8	2,962.0	15.8	7.4	121.22	-635.9	1,498.2	753.3	744.3	8.97	83.933			
4,400.0	2,882.4	3,678.8	2,962.0	16.3	7.4	121.22	-635.9	1,498.2	777.9	768.9	8.94	87.011			
4,425.0	2,882.1	3,678.8	2,962.0	16.8	7.4	121.22	-635.9	1,498.2	802.5	793.6	8.91	90.079			
4,450.0	2,881.8	3,678.8	2,962.0	17.3	7.4	121.22	-635.9	1,498.2	827.2	818.3	8.88	93.151			
4,475.0	2,881.5	3,678.8	2,962.0	17.8	7.4	121.22	-635.9	1,498.2	851.8	843.0	8.85	96.228			
4,500.0	2,881.2	3,678.8	2,962.0	18.2	7.4	121.22	-635.9	1,498.2	876.5	867.7	8.83	99.307			

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - Southern Ute 705H - Pilot Hole - WP2.1													Offset Site Error:	5.0 usft
Survey Program: 0-3_MWD+HRGM											Rule Assigned:		Offset Well Error:	1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
4,525.0	2,880.9	3,678.8	2,962.0	18.8	7.4	121.22	-635.9	1,498.2	901.2	892.4	8.80	102.377		
4,550.0	2,880.7	3,678.8	2,962.0	19.3	7.4	121.22	-635.9	1,498.2	925.9	917.1	8.78	105.449		
4,575.0	2,880.4	3,678.8	2,962.0	19.8	7.4	121.22	-635.9	1,498.2	950.7	941.9	8.76	108.522		
4,600.0	2,880.1	3,678.8	2,962.0	20.3	7.4	121.22	-635.9	1,498.2	975.4	966.7	8.74	111.598		
4,625.0	2,879.8	3,678.8	2,962.0	20.8	7.4	121.22	-635.9	1,498.2	1,000.2	991.4	8.72	114.663		
4,650.0	2,879.5	3,678.8	2,962.0	21.3	7.4	121.22	-635.9	1,498.2	1,024.9	1,016.2	8.71	117.728		
4,675.0	2,879.2	3,678.8	2,962.0	21.8	7.4	121.22	-635.9	1,498.2	1,049.7	1,041.0	8.69	120.795		
4,700.0	2,878.9	3,678.8	2,962.0	22.4	7.4	121.22	-635.9	1,498.2	1,074.5	1,065.8	8.68	123.861		
4,725.0	2,878.6	3,678.8	2,962.0	22.9	7.4	121.22	-635.9	1,498.2	1,099.3	1,090.7	8.66	126.918		
4,750.0	2,878.4	3,678.8	2,962.0	23.4	7.4	121.22	-635.9	1,498.2	1,124.1	1,115.5	8.65	129.974		
4,775.0	2,878.1	3,678.8	2,962.0	23.9	7.4	121.22	-635.9	1,498.2	1,148.9	1,140.3	8.64	133.030		
4,800.0	2,877.8	3,678.8	2,962.0	24.5	7.4	121.22	-635.9	1,498.2	1,173.8	1,165.1	8.63	136.086		
4,825.0	2,877.5	3,678.8	2,962.0	25.0	7.4	121.22	-635.9	1,498.2	1,198.6	1,190.0	8.61	139.132		
4,850.0	2,877.2	3,678.8	2,962.0	25.5	7.4	121.22	-635.9	1,498.2	1,223.4	1,214.8	8.61	142.176		
4,875.0	2,876.9	3,678.8	2,962.0	26.1	7.4	121.22	-635.9	1,498.2	1,248.3	1,239.7	8.60	145.220		
4,900.0	2,876.6	3,678.8	2,962.0	26.6	7.4	121.22	-635.9	1,498.2	1,273.1	1,264.6	8.59	148.263		
4,925.0	2,876.3	3,678.8	2,962.0	27.1	7.4	121.22	-635.9	1,498.2	1,298.0	1,289.4	8.58	151.296		
4,950.0	2,876.1	3,678.8	2,962.0	27.7	7.4	121.22	-635.9	1,498.2	1,322.9	1,314.3	8.57	154.327		
4,975.0	2,875.8	3,678.8	2,962.0	28.2	7.4	121.22	-635.9	1,498.2	1,347.7	1,339.2	8.56	157.357		
5,000.0	2,875.5	3,678.8	2,962.0	28.8	7.4	121.22	-635.9	1,498.2	1,372.6	1,364.1	8.56	160.386		
5,025.0	2,875.2	3,678.8	2,962.0	29.3	7.4	121.22	-635.9	1,498.2	1,397.5	1,388.9	8.55	163.405		
5,050.0	2,874.9	3,678.8	2,962.0	29.9	7.4	121.22	-635.9	1,498.2	1,422.4	1,413.8	8.55	166.422		
5,075.0	2,874.6	3,678.8	2,962.0	30.4	7.4	121.22	-635.9	1,498.2	1,447.3	1,438.7	8.54	169.437		
5,100.0	2,874.3	3,678.8	2,962.0	30.9	7.4	121.22	-635.9	1,498.2	1,472.1	1,463.6	8.54	172.450		
5,125.0	2,874.0	3,678.8	2,962.0	31.5	7.4	121.22	-635.9	1,498.2	1,497.0	1,488.5	8.53	175.454		
5,150.0	2,873.8	3,678.8	2,962.0	32.1	7.4	121.22	-635.9	1,498.2	1,521.9	1,513.4	8.53	178.456		
5,175.0	2,873.5	3,678.8	2,962.0	32.6	7.4	121.22	-635.9	1,498.2	1,546.8	1,538.3	8.52	181.455		
5,200.0	2,873.2	3,678.8	2,962.0	33.2	7.4	121.22	-635.9	1,498.2	1,571.7	1,563.2	8.52	184.453		
5,225.0	2,872.9	3,678.8	2,962.0	33.7	7.4	121.22	-635.9	1,498.2	1,596.7	1,588.1	8.52	187.441		
5,250.0	2,872.6	3,678.8	2,962.0	34.3	7.4	121.22	-635.9	1,498.2	1,621.6	1,613.0	8.52	190.427		
5,275.0	2,872.3	3,678.8	2,962.0	34.8	7.4	121.22	-635.9	1,498.2	1,646.5	1,638.0	8.51	193.410		
5,300.0	2,872.0	3,678.8	2,962.0	35.4	7.4	121.22	-635.9	1,498.2	1,671.4	1,662.9	8.51	196.390		
5,325.0	2,871.7	3,678.8	2,962.0	35.9	7.4	121.22	-635.9	1,498.2	1,696.3	1,687.8	8.51	199.362		
5,350.0	2,871.5	3,678.8	2,962.0	36.5	7.4	121.22	-635.9	1,498.2	1,721.2	1,712.7	8.51	202.331		
5,375.0	2,871.2	3,678.8	2,962.0	37.1	7.4	121.22	-635.9	1,498.2	1,746.1	1,737.6	8.51	205.297		
5,400.0	2,870.9	3,678.8	2,962.0	37.6	7.4	121.22	-635.9	1,498.2	1,771.1	1,762.6	8.50	208.260		
5,425.0	2,870.6	3,678.8	2,962.0	38.2	7.4	121.22	-635.9	1,498.2	1,796.0	1,787.5	8.50	211.214		
5,450.0	2,870.3	3,678.8	2,962.0	38.7	7.4	121.22	-635.9	1,498.2	1,820.9	1,812.4	8.50	214.166		
5,475.0	2,870.0	3,678.8	2,962.0	39.3	7.4	121.22	-635.9	1,498.2	1,845.9	1,837.4	8.50	217.114		
5,500.0	2,869.7	3,678.8	2,962.0	39.9	7.4	121.22	-635.9	1,498.2	1,870.8	1,862.3	8.50	220.059		
5,525.0	2,869.4	3,678.8	2,962.0	40.4	7.4	121.22	-635.9	1,498.2	1,895.7	1,887.2	8.50	222.995		
5,550.0	2,869.1	3,678.8	2,962.0	41.0	7.4	121.22	-635.9	1,498.2	1,920.7	1,912.2	8.50	225.929		
5,575.0	2,868.9	3,678.8	2,962.0	41.6	7.4	121.22	-635.9	1,498.2	1,945.6	1,937.1	8.50	228.859		
5,600.0	2,868.6	3,678.8	2,962.0	42.1	7.4	121.22	-635.9	1,498.2	1,970.5	1,962.0	8.50	231.785		
5,625.0	2,868.3	3,678.8	2,962.0	42.7	7.4	121.22	-635.9	1,498.2	1,995.5	1,987.0	8.50	234.703		
5,650.0	2,868.0	3,678.8	2,962.0	43.3	7.4	121.22	-635.9	1,498.2	2,020.4	2,011.9	8.50	237.617		
5,675.0	2,867.7	3,678.8	2,962.0	43.8	7.4	121.22	-635.9	1,498.2	2,045.4	2,036.9	8.50	240.528		
5,700.0	2,867.4	3,678.8	2,962.0	44.4	7.4	121.22	-635.9	1,498.2	2,070.3	2,061.8	8.50	243.435		
5,725.0	2,867.1	3,678.8	2,962.0	45.0	7.4	121.22	-635.9	1,498.2	2,095.3	2,086.7	8.51	246.334		
5,750.0	2,866.8	3,678.8	2,962.0	45.6	7.4	121.22	-635.9	1,498.2	2,120.2	2,111.7	8.51	249.229		
5,775.0	2,866.6	3,678.8	2,962.0	46.1	7.4	121.22	-635.9	1,498.2	2,145.2	2,136.6	8.51	252.120		
5,800.0	2,866.3	3,678.8	2,962.0	46.7	7.4	121.22	-635.9	1,498.2	2,170.1	2,161.6	8.51	255.007		

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - Southern Ute 705H - Pilot Hole - WP2.1													Offset Site Error:	5.0 usft
Survey Program: 0-3_MWD+HRGM													Offset Well Error:	1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,825.0	2,866.0	3,678.8	2,962.0	47.3	7.4	121.22	-635.9	1,498.2	2,195.1	2,186.5	8.51	257.886		
5,850.0	2,865.7	3,678.8	2,962.0	47.8	7.4	121.22	-635.9	1,498.2	2,220.0	2,211.5	8.51	260.760		
5,875.0	2,865.4	3,678.8	2,962.0	48.4	7.4	121.22	-635.9	1,498.2	2,245.0	2,236.4	8.52	263.631		
5,900.0	2,865.1	3,678.8	2,962.0	49.0	7.4	121.22	-635.9	1,498.2	2,269.9	2,261.4	8.52	266.498		
5,925.0	2,864.8	3,678.8	2,962.0	49.6	7.4	121.22	-635.9	1,498.2	2,294.9	2,286.3	8.52	269.356		
5,950.0	2,864.5	3,678.8	2,962.0	50.1	7.4	121.22	-635.9	1,498.2	2,319.8	2,311.3	8.52	272.210		
5,975.0	2,864.3	3,678.8	2,962.0	50.7	7.4	121.22	-635.9	1,498.2	2,344.8	2,336.3	8.52	275.059		
6,000.0	2,864.0	3,678.8	2,962.0	51.3	7.4	121.22	-635.9	1,498.2	2,369.7	2,361.2	8.53	277.905		
6,025.0	2,863.7	3,678.8	2,962.0	51.9	7.4	121.22	-635.9	1,498.2	2,394.7	2,386.2	8.53	280.742		
6,050.0	2,863.4	3,678.8	2,962.0	52.5	7.4	121.22	-635.9	1,498.2	2,419.7	2,411.1	8.53	283.574		
6,075.0	2,863.1	3,678.8	2,962.0	53.0	7.4	121.22	-635.9	1,498.2	2,444.6	2,436.1	8.54	286.402		
6,100.0	2,862.8	3,678.8	2,962.0	53.6	7.4	121.22	-635.9	1,498.2	2,469.6	2,461.0	8.54	289.226		
6,125.0	2,862.5	3,678.8	2,962.0	54.2	7.4	121.22	-635.9	1,498.2	2,494.5	2,486.0	8.54	292.040		
6,150.0	2,862.2	3,678.8	2,962.0	54.8	7.4	121.22	-635.9	1,498.2	2,519.5	2,511.0	8.55	294.850		
6,175.0	2,862.0	3,678.8	2,962.0	55.4	7.4	121.22	-635.9	1,498.2	2,544.5	2,535.9	8.55	297.656		
6,200.0	2,861.7	3,678.8	2,962.0	55.9	7.4	121.22	-635.9	1,498.2	2,569.4	2,560.9	8.55	300.457		
6,225.0	2,861.4	3,678.8	2,962.0	56.5	7.4	121.22	-635.9	1,498.2	2,594.4	2,585.8	8.56	303.249		
6,250.0	2,861.1	3,678.8	2,962.0	57.1	7.4	121.22	-635.9	1,498.2	2,619.4	2,610.8	8.56	306.036		
6,275.0	2,860.8	3,678.8	2,962.0	57.7	7.4	121.22	-635.9	1,498.2	2,644.3	2,635.8	8.56	308.818		
6,300.0	2,860.5	3,678.8	2,962.0	58.3	7.4	121.22	-635.9	1,498.2	2,669.3	2,660.7	8.57	311.596		
6,325.0	2,860.2	3,678.8	2,962.0	58.8	7.4	121.22	-635.9	1,498.2	2,694.3	2,685.7	8.57	314.364		
6,350.0	2,859.9	3,678.8	2,962.0	59.4	7.4	121.22	-635.9	1,498.2	2,719.2	2,710.7	8.57	317.128		
6,375.0	2,859.7	3,678.8	2,962.0	60.0	7.4	121.22	-635.9	1,498.2	2,744.2	2,735.6	8.58	319.886		
6,400.0	2,859.4	3,678.8	2,962.0	60.6	7.4	121.22	-635.9	1,498.2	2,769.2	2,760.6	8.58	322.640		
6,425.0	2,859.1	3,678.8	2,962.0	61.2	7.4	121.22	-635.9	1,498.2	2,794.1	2,785.6	8.59	325.384		
6,450.0	2,858.8	3,678.8	2,962.0	61.8	7.4	121.22	-635.9	1,498.2	2,819.1	2,810.5	8.59	328.124		
6,475.0	2,858.5	3,678.8	2,962.0	62.3	7.4	121.22	-635.9	1,498.2	2,844.1	2,835.5	8.60	330.858		
6,500.0	2,858.2	3,678.8	2,962.0	62.9	7.4	121.22	-635.9	1,498.2	2,869.0	2,860.4	8.60	333.587		
6,525.0	2,857.9	3,678.8	2,962.0	63.5	7.4	121.22	-635.9	1,498.2	2,894.0	2,885.4	8.61	336.306		
6,550.0	2,857.6	3,678.8	2,962.0	64.1	7.4	121.22	-635.9	1,498.2	2,919.0	2,910.4	8.61	339.020		
6,575.0	2,857.4	3,678.8	2,962.0	64.7	7.4	121.22	-635.9	1,498.2	2,944.0	2,935.4	8.61	341.730		
6,600.0	2,857.1	3,678.8	2,962.0	65.3	7.4	121.22	-635.9	1,498.2	2,968.9	2,960.3	8.62	344.434		
6,625.0	2,856.8	3,678.8	2,962.0	65.9	7.4	121.22	-635.9	1,498.2	2,993.9	2,985.3	8.62	347.127		
6,650.0	2,856.5	3,678.8	2,962.0	66.5	7.4	121.22	-635.9	1,498.2	3,018.9	3,010.3	8.63	349.816		
6,675.0	2,856.2	3,678.8	2,962.0	67.0	7.4	121.22	-635.9	1,498.2	3,043.9	3,035.2	8.64	352.499		
6,700.0	2,855.9	3,678.8	2,962.0	67.6	7.4	121.22	-635.9	1,498.2	3,068.8	3,060.2	8.64	355.177		
6,725.0	2,855.6	3,678.8	2,962.0	68.2	7.4	121.22	-635.9	1,498.2	3,093.8	3,085.2	8.65	357.844		
6,750.0	2,855.3	3,678.8	2,962.0	68.8	7.4	121.22	-635.9	1,498.2	3,118.8	3,110.1	8.65	360.506		
6,775.0	2,855.1	3,678.8	2,962.0	69.4	7.4	121.22	-635.9	1,498.2	3,143.8	3,135.1	8.66	363.163		
6,800.0	2,854.8	3,678.8	2,962.0	70.0	7.4	121.22	-635.9	1,498.2	3,168.7	3,160.1	8.66	365.814		
6,825.0	2,854.5	3,678.8	2,962.0	70.6	7.4	121.22	-635.9	1,498.2	3,193.7	3,185.1	8.67	368.455		
6,850.0	2,854.2	3,678.8	2,962.0	71.2	7.4	121.22	-635.9	1,498.2	3,218.7	3,210.0	8.67	371.090		
6,875.0	2,853.9	3,678.8	2,962.0	71.7	7.4	121.22	-635.9	1,498.2	3,243.7	3,235.0	8.68	373.720		
6,900.0	2,853.6	3,678.8	2,962.0	72.3	7.4	121.22	-635.9	1,498.2	3,268.7	3,260.0	8.69	376.344		
6,925.0	2,853.3	3,678.8	2,962.0	72.9	7.4	121.22	-635.9	1,498.2	3,293.6	3,284.9	8.69	378.957		
6,950.0	2,853.0	3,678.8	2,962.0	73.5	7.4	121.22	-635.9	1,498.2	3,318.6	3,309.9	8.70	381.564		
6,975.0	2,852.8	3,678.8	2,962.0	74.1	7.4	121.22	-635.9	1,498.2	3,343.6	3,334.9	8.70	384.166		
7,000.0	2,852.5	3,678.8	2,962.0	74.7	7.4	121.22	-635.9	1,498.2	3,368.6	3,359.9	8.71	386.762		
7,025.0	2,852.2	3,678.8	2,962.0	75.3	7.4	121.22	-635.9	1,498.2	3,393.5	3,384.8	8.72	389.347		
7,050.0	2,851.9	3,678.8	2,962.0	75.9	7.4	121.22	-635.9	1,498.2	3,418.5	3,409.8	8.72	391.926		
7,075.0	2,851.6	3,678.8	2,962.0	76.5	7.4	121.22	-635.9	1,498.2	3,443.5	3,434.8	8.73	394.499		
7,100.0	2,851.3	3,678.8	2,962.0	77.1	7.4	121.22	-635.9	1,498.2	3,468.5	3,459.8	8.74	397.067		

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - Southern Ute 705H - Pilot Hole - WP2.1												Offset Site Error: 5.0 usft	
Survey Program: 0-3_MWD+HRGM												Offset Well Error: 1.0 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
7,125.0	2,851.0	3,678.8	2,962.0	77.7	7.4	121.22	-635.9	1,498.2	3,493.5	3,484.7	8.74	399.623	
7,150.0	2,850.7	3,678.8	2,962.0	78.2	7.4	121.22	-635.9	1,498.2	3,518.4	3,509.7	8.75	402.173	
7,175.0	2,850.4	3,678.8	2,962.0	78.8	7.4	121.22	-635.9	1,498.2	3,543.4	3,534.7	8.76	404.718	
7,200.0	2,850.2	3,678.8	2,962.0	79.4	7.4	121.22	-635.9	1,498.2	3,568.4	3,559.6	8.76	407.256	

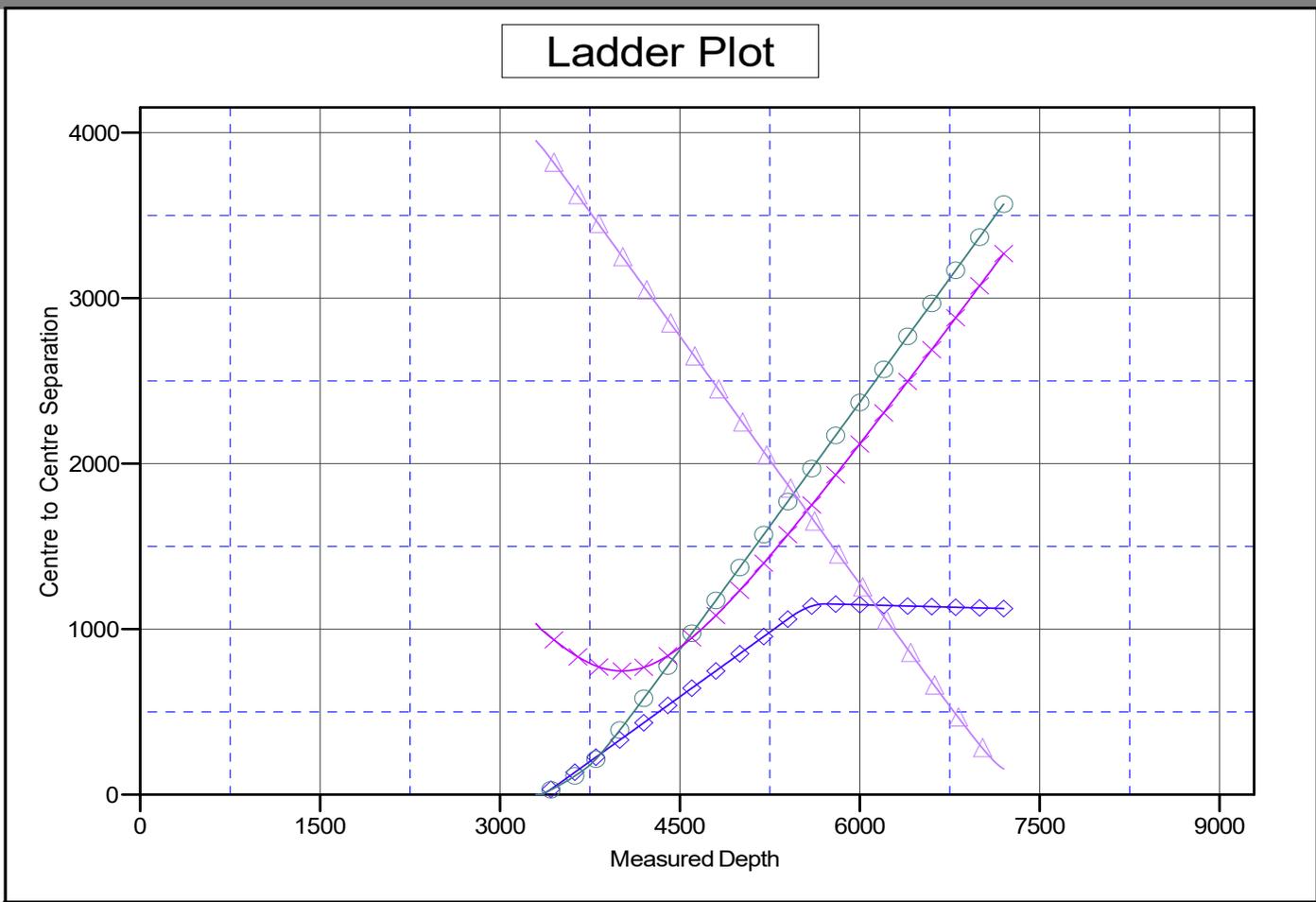
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Anticollision Report

Company: Hilcorp Energy Company	Local Co-ordinate Reference: Well Southern Ute 705H	
Project: Farmington, NM	TVD Reference: RKB to MSL= 6310 @ 6310.0usft	
Reference Site: San Juan Basin	MD Reference: RKB to MSL= 6310 @ 6310.0usft	
Site Error: 5.0 usft	North Reference: Grid	
Reference Well: Southern Ute 705H	Survey Calculation Method: Minimum Curvature	
Well Error: 1.0 usft	Output errors are at 2.00 sigma	
Reference Wellbore Lateral No.2	Database: EDM 5000.1 Single User Db	
Reference Design: WP2.1	Offset TVD Reference: Offset Datum	

Reference Depths are relative to RKB to MSL= 6310 @ 6310.0usft
 Offset Depths are relative to Offset Datum
 Central Meridian is 107° 50' 0.000 W

Coordinates are relative to: Southern Ute 705H
 Coordinate System is US State Plane 1927 (Exact solution), New Mexico West 30
 Grid Convergence at Surface is: 0.15°



LEGEND

- ◆ Southern Ute 705H, Lateral No.1, WP2.1 V0
- Southern Ute 705H, Plkt Hole, WP2.1 V0
- ▲ SOUTHERN UTE 005, ST00, ST00 V0
- ✕ SOUTHERN UTE 005A, ST00, ST00 V0

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

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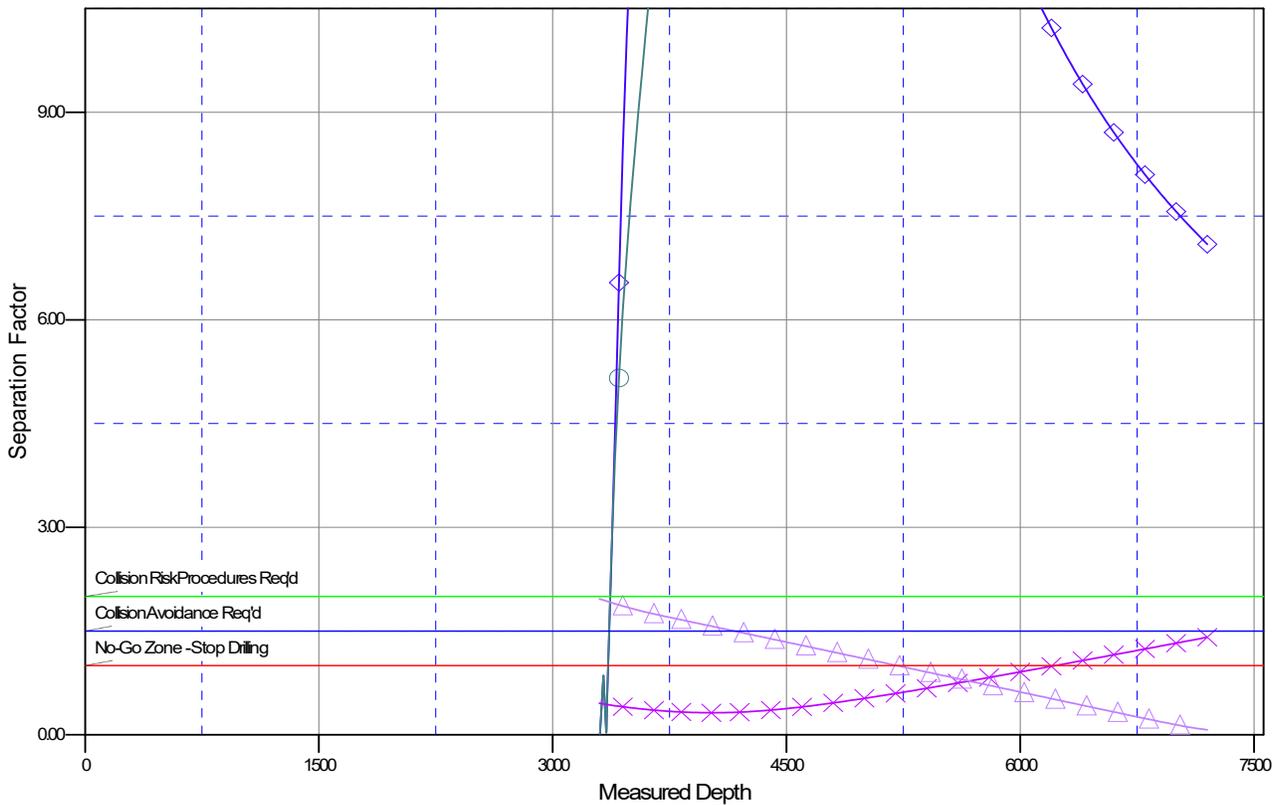
Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB to MSL= 6310 @ 6310.0usft
 Offset Depths are relative to Offset Datum
 Central Meridian is 107° 50' 0.000 W

Coordinates are relative to: Southern Ute 705H
 Coordinate System is US State Plane 1927 (Exact solution), New Mexico West 30
 Grid Convergence at Surface is: 0.15°

Separation Factor Plot



LEGEND

- ◆ Southern Ute 705H, Lateral No. 1, WP2.1 V0
- Southern Ute 705H, Pklt Hole, WP2.1 V0
- ▲ SOUTHERN UTE 005, ST00, ST00 V0
- × SOUTHERN UTE 005A, ST00, ST00 V0

Hilcorp Energy Company

**Farmington, NM
San Juan Basin
Southern Ute 705H**

**Lateral No.1
WP2.1**

Anticollision Report

15 March, 2023

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.1	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Reference WP2.1	
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	MD + Stations Interval 25.0usft
Depth Range:	3,350.0 to 7,545.8usft
Results Limited by:	Maximum centre distance of 10,000.0usft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Pedal Curve
Casing Method:	Through Borehole Radius

Survey Tool Program		Date 3/14/2023		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	3,350.0	WP2.1 (Pilot Hole)	3_MWD+HRGM	B001Mb: HRGM declination correction only
3,350.0	7,545.7	WP2.1 (Lateral No.1)	3_MWD+HRGM	B001Mb: HRGM declination correction only

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
San Juan Basin						
SOUTHERN UTE 005 - ST00 - ST00	4,310.2	3,304.1	298.2	-2,052.9	0.127	Collision RiskProcedures Req'd
SOUTHERN UTE 005A - ST00 - ST00	7,545.8	2,922.0	1,263.7	-882.1	0.589	Collision RiskProcedures Req'd
Southern Ute 705H - Pilot Hole - WP2.1	3,650.0	3,637.8	71.6	64.4	9.969	CC, ES, SF

Offset Design: San Juan Basin - SOUTHERN UTE 005 - ST00 - ST00												Offset Site Error: 5.0 usft	
Survey Program: 8325-3_Blind												Offset Well Error: 1.0 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
				Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
3,350.0	2,823.1	3,240.1	3,240.1	27.7	2,264.0	49.42	-1,271.7	1,871.8	992.8	-1,289.5	2,282.27	0.435	Collision RiskProcedures Req'd
3,375.0	2,833.5	3,250.5	3,250.5	28.0	2,271.2	43.79	-1,271.7	1,871.8	972.0	-1,318.0	2,290.04	0.424	Collision RiskProcedures Req'd
3,393.0	2,840.8	3,257.8	3,257.8	28.3	2,276.3	39.43	-1,271.7	1,871.8	957.8	-1,337.7	2,295.51	0.417	Collision RiskProcedures Req'd
3,400.0	2,843.6	3,260.6	3,260.6	28.3	2,278.3	40.39	-1,271.7	1,871.8	951.7	-1,345.8	2,297.50	0.414	Collision RiskProcedures Req'd
3,425.0	2,852.9	3,269.9	3,269.9	28.5	2,284.8	44.12	-1,271.7	1,871.8	929.7	-1,374.5	2,304.17	0.403	Collision RiskProcedures Req'd
3,450.0	2,861.2	3,278.2	3,278.2	28.7	2,290.6	48.31	-1,271.7	1,871.8	907.4	-1,402.7	2,310.16	0.393	Collision RiskProcedures Req'd
3,475.0	2,868.5	3,285.5	3,285.5	28.9	2,295.7	52.97	-1,271.7	1,871.8	884.9	-1,430.6	2,315.46	0.382	Collision RiskProcedures Req'd
3,500.0	2,874.7	3,291.7	3,291.7	29.1	2,300.1	58.10	-1,271.7	1,871.8	862.2	-1,457.9	2,320.07	0.372	Collision RiskProcedures Req'd
3,525.0	2,880.0	3,297.0	3,297.0	29.3	2,303.7	63.63	-1,271.7	1,871.8	839.3	-1,484.7	2,323.97	0.361	Collision RiskProcedures Req'd
3,550.0	2,884.2	3,301.2	3,301.2	29.6	2,306.7	69.46	-1,271.7	1,871.8	816.3	-1,510.9	2,327.16	0.351	Collision RiskProcedures Req'd
3,575.0	2,887.4	3,304.4	3,304.4	29.8	2,308.9	75.45	-1,271.7	1,871.8	793.3	-1,536.4	2,329.65	0.341	Collision RiskProcedures Req'd
3,600.0	2,889.5	3,306.5	3,306.5	30.1	2,310.4	81.43	-1,271.7	1,871.8	770.3	-1,561.2	2,331.42	0.330	Collision RiskProcedures Req'd
3,625.0	2,890.5	3,307.5	3,307.5	30.3	2,311.1	87.23	-1,271.7	1,871.8	747.3	-1,585.2	2,332.47	0.320	Collision RiskProcedures Req'd
3,640.6	2,890.6	3,307.6	3,307.6	30.5	2,311.2	90.68	-1,271.7	1,871.8	733.1	-1,599.7	2,332.76	0.314	Collision RiskProcedures Req'd
3,650.0	2,890.6	3,307.6	3,307.6	30.6	2,311.1	90.67	-1,271.7	1,871.8	724.4	-1,608.4	2,332.86	0.311	Collision RiskProcedures Req'd
3,675.0	2,890.5	3,307.5	3,307.5	30.9	2,311.1	90.64	-1,271.7	1,871.8	701.7	-1,631.4	2,333.13	0.301	Collision RiskProcedures Req'd
3,700.0	2,890.3	3,307.3	3,307.3	31.2	2,311.0	90.62	-1,271.7	1,871.8	679.2	-1,654.2	2,333.43	0.291	Collision RiskProcedures Req'd
3,725.0	2,890.2	3,307.2	3,307.2	31.5	2,310.9	90.59	-1,271.7	1,871.8	656.8	-1,676.9	2,333.77	0.281	Collision RiskProcedures Req'd
3,750.0	2,890.1	3,307.1	3,307.1	31.8	2,310.8	90.57	-1,271.7	1,871.8	634.7	-1,699.5	2,334.14	0.272	Collision RiskProcedures Req'd
3,775.0	2,889.9	3,306.9	3,306.9	32.1	2,310.7	90.54	-1,271.7	1,871.8	612.7	-1,721.8	2,334.54	0.262	Collision RiskProcedures Req'd
3,800.0	2,889.8	3,306.8	3,306.8	32.4	2,310.6	90.52	-1,271.7	1,871.8	591.0	-1,744.0	2,334.98	0.253	Collision RiskProcedures Req'd
3,825.0	2,889.7	3,306.7	3,306.7	32.8	2,310.5	90.49	-1,271.7	1,871.8	569.5	-1,765.9	2,335.47	0.244	Collision RiskProcedures Req'd
3,850.0	2,889.5	3,306.5	3,306.5	33.1	2,310.4	90.47	-1,271.7	1,871.8	548.4	-1,787.6	2,336.01	0.235	Collision RiskProcedures Req'd

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.1	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - SOUTHERN UTE 005 - ST00 - ST00											Offset Site Error: 5.0 usft		
Survey Program: 8325-3_Blind											Offset Well Error: 1.0 usft		
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
3,875.0	2,889.4	3,306.4	3,306.4	33.5	2,310.3	90.44	-1,271.7	1,871.8	527.6	-1,809.0	2,336.59	0.226	Collision RiskProcedures Req'd
3,900.0	2,889.3	3,306.3	3,306.3	33.8	2,310.2	90.42	-1,271.7	1,871.8	507.2	-1,830.1	2,337.23	0.217	Collision RiskProcedures Req'd
3,925.0	2,889.1	3,306.1	3,306.1	34.2	2,310.1	90.39	-1,271.7	1,871.8	487.2	-1,850.8	2,337.93	0.208	Collision RiskProcedures Req'd
3,950.0	2,889.0	3,306.0	3,306.0	34.5	2,310.0	90.36	-1,271.7	1,871.8	467.6	-1,871.0	2,338.68	0.200	Collision RiskProcedures Req'd
3,975.0	2,888.9	3,305.9	3,305.9	34.9	2,309.9	90.34	-1,271.7	1,871.8	448.7	-1,890.8	2,339.50	0.192	Collision RiskProcedures Req'd
4,000.0	2,888.8	3,305.8	3,305.8	35.3	2,309.9	90.31	-1,271.7	1,871.8	430.3	-1,910.1	2,340.37	0.184	Collision RiskProcedures Req'd
4,025.0	2,888.6	3,305.6	3,305.6	35.7	2,309.8	90.29	-1,271.7	1,871.8	412.7	-1,928.7	2,341.31	0.176	Collision RiskProcedures Req'd
4,050.0	2,888.5	3,305.5	3,305.5	36.0	2,309.7	90.26	-1,271.7	1,871.8	395.8	-1,946.5	2,342.30	0.169	Collision RiskProcedures Req'd
4,075.0	2,888.4	3,305.4	3,305.4	36.4	2,309.6	90.24	-1,271.7	1,871.8	379.8	-1,963.5	2,343.34	0.162	Collision RiskProcedures Req'd
4,100.0	2,888.2	3,305.2	3,305.2	36.8	2,309.5	90.21	-1,271.7	1,871.8	364.9	-1,979.6	2,344.41	0.156	Collision RiskProcedures Req'd
4,125.0	2,888.1	3,305.1	3,305.1	37.2	2,309.4	90.19	-1,271.7	1,871.8	351.1	-1,994.5	2,345.52	0.150	Collision RiskProcedures Req'd
4,150.0	2,888.0	3,305.0	3,305.0	37.6	2,309.3	90.16	-1,271.7	1,871.8	338.5	-2,008.1	2,346.61	0.144	Collision RiskProcedures Req'd
4,175.0	2,887.8	3,304.8	3,304.8	38.0	2,309.2	90.14	-1,271.7	1,871.8	327.4	-2,020.2	2,347.67	0.139	Collision RiskProcedures Req'd
4,200.0	2,887.7	3,304.7	3,304.7	38.4	2,309.1	90.11	-1,271.7	1,871.8	317.9	-2,030.7	2,348.64	0.135	Collision RiskProcedures Req'd
4,225.0	2,887.6	3,304.6	3,304.6	38.9	2,309.0	90.09	-1,271.7	1,871.8	310.2	-2,039.4	2,349.52	0.132	Collision RiskProcedures Req'd
4,250.0	2,887.4	3,304.4	3,304.4	39.3	2,308.9	90.06	-1,271.7	1,871.8	304.2	-2,046.0	2,350.24	0.129	Collision RiskProcedures Req'd
4,275.0	2,887.3	3,304.3	3,304.3	39.7	2,308.8	90.04	-1,271.7	1,871.8	300.3	-2,050.5	2,350.76	0.128	Collision RiskProcedures Req'd
4,300.0	2,887.2	3,304.2	3,304.2	40.1	2,308.8	90.01	-1,271.7	1,871.8	298.4	-2,052.7	2,351.05	0.127	Collision RiskProcedures Req'd
4,310.2	2,887.1	3,304.1	3,304.1	40.3	2,308.7	90.00	-1,271.7	1,871.8	298.2	-2,052.9	2,351.10	0.127	Collision RiskProcedures Req'd, CC, E
4,325.0	2,887.0	3,304.0	3,304.0	40.6	2,308.7	89.99	-1,271.7	1,871.8	298.6	-2,052.5	2,351.11	0.127	Collision RiskProcedures Req'd
4,350.0	2,886.9	3,303.9	3,303.9	41.0	2,308.6	89.96	-1,271.7	1,871.8	300.9	-2,050.1	2,350.92	0.128	Collision RiskProcedures Req'd
4,375.0	2,886.8	3,303.8	3,303.8	41.5	2,308.5	89.93	-1,271.7	1,871.8	305.2	-2,045.3	2,350.49	0.130	Collision RiskProcedures Req'd
4,400.0	2,886.6	3,303.6	3,303.6	41.9	2,308.4	89.91	-1,271.7	1,871.8	311.4	-2,038.4	2,349.86	0.133	Collision RiskProcedures Req'd
4,425.0	2,886.5	3,303.5	3,303.5	42.4	2,308.3	89.88	-1,271.7	1,871.8	319.5	-2,029.5	2,349.07	0.136	Collision RiskProcedures Req'd
4,450.0	2,886.4	3,303.4	3,303.4	42.8	2,308.2	89.86	-1,271.7	1,871.8	329.3	-2,018.8	2,348.14	0.140	Collision RiskProcedures Req'd
4,475.0	2,886.2	3,303.2	3,303.2	43.3	2,308.1	89.83	-1,271.7	1,871.8	340.7	-2,006.4	2,347.12	0.145	Collision RiskProcedures Req'd
4,500.0	2,886.1	3,303.1	3,303.1	43.7	2,308.0	89.81	-1,271.7	1,871.8	353.5	-1,992.6	2,346.04	0.151	Collision RiskProcedures Req'd
4,525.0	2,886.0	3,303.0	3,303.0	44.2	2,307.9	89.78	-1,271.7	1,871.8	367.5	-1,977.4	2,344.94	0.157	Collision RiskProcedures Req'd
4,550.0	2,885.9	3,302.9	3,302.9	44.7	2,307.8	89.76	-1,271.7	1,871.8	382.6	-1,961.2	2,343.84	0.163	Collision RiskProcedures Req'd
4,575.0	2,885.7	3,302.7	3,302.7	45.1	2,307.7	89.73	-1,271.7	1,871.8	398.8	-1,944.0	2,342.76	0.170	Collision RiskProcedures Req'd
4,600.0	2,885.6	3,302.6	3,302.6	45.6	2,307.6	89.71	-1,271.7	1,871.8	415.8	-1,925.9	2,341.70	0.178	Collision RiskProcedures Req'd
4,625.0	2,885.5	3,302.5	3,302.5	46.1	2,307.6	89.68	-1,271.7	1,871.8	433.6	-1,907.1	2,340.69	0.185	Collision RiskProcedures Req'd
4,650.0	2,885.3	3,302.3	3,302.3	46.5	2,307.5	89.66	-1,271.7	1,871.8	452.1	-1,887.6	2,339.72	0.193	Collision RiskProcedures Req'd
4,675.0	2,885.2	3,302.2	3,302.2	47.0	2,307.4	89.63	-1,271.7	1,871.8	471.1	-1,867.6	2,338.80	0.201	Collision RiskProcedures Req'd
4,700.0	2,885.1	3,302.1	3,302.1	47.5	2,307.3	89.61	-1,271.7	1,871.8	490.8	-1,847.2	2,337.92	0.210	Collision RiskProcedures Req'd
4,725.0	2,884.9	3,301.9	3,301.9	48.0	2,307.2	89.58	-1,271.7	1,871.8	510.8	-1,826.3	2,337.10	0.219	Collision RiskProcedures Req'd
4,750.0	2,884.8	3,301.8	3,301.8	48.5	2,307.1	89.55	-1,271.7	1,871.8	531.3	-1,805.0	2,336.32	0.227	Collision RiskProcedures Req'd
4,775.0	2,884.7	3,301.7	3,301.7	48.9	2,307.0	89.53	-1,271.7	1,871.8	552.2	-1,783.4	2,335.59	0.236	Collision RiskProcedures Req'd
4,800.0	2,884.5	3,301.5	3,301.5	49.4	2,306.9	89.50	-1,271.7	1,871.8	573.4	-1,761.5	2,334.90	0.246	Collision RiskProcedures Req'd
4,825.0	2,884.4	3,301.4	3,301.4	49.9	2,306.8	89.48	-1,271.7	1,871.8	594.9	-1,739.4	2,334.26	0.255	Collision RiskProcedures Req'd
4,850.0	2,884.3	3,301.3	3,301.3	50.4	2,306.7	89.45	-1,271.7	1,871.8	616.7	-1,717.0	2,333.65	0.264	Collision RiskProcedures Req'd
4,875.0	2,884.1	3,301.1	3,301.1	50.9	2,306.6	89.43	-1,271.7	1,871.8	638.7	-1,694.4	2,333.07	0.274	Collision RiskProcedures Req'd
4,900.0	2,884.0	3,301.0	3,301.0	51.4	2,306.5	89.40	-1,271.7	1,871.8	660.9	-1,671.7	2,332.53	0.283	Collision RiskProcedures Req'd
4,925.0	2,883.9	3,300.9	3,300.9	51.9	2,306.5	89.38	-1,271.7	1,871.8	683.3	-1,648.8	2,332.02	0.293	Collision RiskProcedures Req'd
4,950.0	2,883.7	3,300.7	3,300.7	52.4	2,306.4	89.35	-1,271.7	1,871.8	705.8	-1,625.7	2,331.54	0.303	Collision RiskProcedures Req'd
4,975.0	2,883.6	3,300.6	3,300.6	52.9	2,306.3	89.33	-1,271.7	1,871.8	728.6	-1,602.5	2,331.08	0.313	Collision RiskProcedures Req'd
5,000.0	2,883.5	3,300.5	3,300.5	53.4	2,306.2	89.30	-1,271.7	1,871.8	751.5	-1,579.2	2,330.65	0.322	Collision RiskProcedures Req'd
5,025.0	2,883.4	3,300.4	3,300.4	53.9	2,306.1	89.28	-1,271.7	1,871.8	774.5	-1,555.8	2,330.24	0.332	Collision RiskProcedures Req'd
5,050.0	2,883.2	3,300.2	3,300.2	54.4	2,306.0	89.25	-1,271.7	1,871.8	797.6	-1,532.3	2,329.85	0.342	Collision RiskProcedures Req'd
5,075.0	2,883.1	3,300.1	3,300.1	54.9	2,305.9	89.23	-1,271.7	1,871.8	820.8	-1,508.6	2,329.48	0.352	Collision RiskProcedures Req'd
5,100.0	2,883.0	3,300.0	3,300.0	55.4	2,305.8	89.20	-1,271.7	1,871.8	844.2	-1,484.9	2,329.13	0.362	Collision RiskProcedures Req'd
5,117.3	2,882.9	3,299.9	3,299.9	55.8	2,305.7	89.18	-1,271.7	1,871.8	860.4	-1,468.5	2,328.90	0.369	Collision RiskProcedures Req'd

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.1	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - SOUTHERN UTE 005 - ST00 - ST00											Offset Site Error: 5.0 usft		
Survey Program: 8325-3_Blind											Offset Well Error: 1.0 usft		
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,125.0	2,882.8	3,299.8	3,299.8	55.9	2,305.7	89.16	-1,271.7	1,871.8	867.6	-1,461.2	2,328.79	0.373	Collision RiskProcedures Req'd
5,150.0	2,882.7	3,299.7	3,299.7	56.5	2,305.6	89.09	-1,271.7	1,871.8	891.2	-1,437.2	2,328.48	0.383	Collision RiskProcedures Req'd
5,175.0	2,882.6	3,299.6	3,299.6	57.0	2,305.5	89.01	-1,271.7	1,871.8	915.1	-1,413.1	2,328.19	0.393	Collision RiskProcedures Req'd
5,200.0	2,882.4	3,299.4	3,299.4	57.5	2,305.4	88.92	-1,271.7	1,871.8	939.0	-1,388.9	2,327.93	0.403	Collision RiskProcedures Req'd
5,225.0	2,882.3	3,299.3	3,299.3	58.0	2,305.3	88.81	-1,271.7	1,871.8	963.2	-1,364.5	2,327.67	0.414	Collision RiskProcedures Req'd
5,250.0	2,882.2	3,299.2	3,299.2	58.5	2,305.3	88.69	-1,271.7	1,871.8	987.4	-1,340.0	2,327.44	0.424	Collision RiskProcedures Req'd
5,275.0	2,882.0	3,299.0	3,299.0	59.1	2,305.2	88.56	-1,271.7	1,871.8	1,011.8	-1,315.4	2,327.23	0.435	Collision RiskProcedures Req'd
5,300.0	2,881.9	3,298.9	3,298.9	59.6	2,305.1	88.40	-1,271.7	1,871.8	1,036.3	-1,290.7	2,327.04	0.445	Collision RiskProcedures Req'd
5,325.0	2,881.8	3,298.8	3,298.8	60.1	2,305.0	88.20	-1,271.7	1,871.8	1,060.9	-1,265.9	2,326.85	0.456	Collision RiskProcedures Req'd
5,350.0	2,881.6	3,298.6	3,298.6	60.6	2,304.9	87.97	-1,271.7	1,871.8	1,085.6	-1,241.1	2,326.67	0.467	Collision RiskProcedures Req'd
5,375.0	2,881.5	3,298.5	3,298.5	61.2	2,304.8	87.68	-1,271.7	1,871.8	1,110.3	-1,216.2	2,326.51	0.477	Collision RiskProcedures Req'd
5,400.0	2,881.3	3,298.3	3,298.3	61.7	2,304.7	87.31	-1,271.7	1,871.8	1,135.1	-1,191.2	2,326.38	0.488	Collision RiskProcedures Req'd
5,425.0	2,881.2	3,298.2	3,298.2	62.3	2,304.6	86.82	-1,271.7	1,871.8	1,160.0	-1,166.2	2,326.23	0.499	Collision RiskProcedures Req'd
5,450.0	2,881.1	3,298.1	3,298.1	62.8	2,304.5	86.14	-1,271.7	1,871.8	1,184.9	-1,141.2	2,326.10	0.509	Collision RiskProcedures Req'd
5,475.0	2,880.9	3,297.9	3,297.9	63.3	2,304.4	85.12	-1,271.7	1,871.8	1,209.8	-1,116.1	2,325.98	0.520	Collision RiskProcedures Req'd
5,500.0	2,880.8	3,297.8	3,297.8	63.9	2,304.3	83.44	-1,271.7	1,871.8	1,234.8	-1,091.1	2,325.88	0.531	Collision RiskProcedures Req'd
5,525.0	2,880.7	3,297.7	3,297.7	64.4	2,304.2	80.13	-1,271.7	1,871.8	1,259.8	-1,066.0	2,325.77	0.542	Collision RiskProcedures Req'd
5,550.0	2,880.5	3,297.5	3,297.5	64.9	2,304.1	70.78	-1,271.7	1,871.8	1,284.8	-1,040.9	2,325.67	0.552	Collision RiskProcedures Req'd
5,575.0	2,880.4	3,297.4	3,297.4	65.5	2,304.0	2.75	-1,271.7	1,871.8	1,309.8	-1,015.8	2,325.58	0.563	Collision RiskProcedures Req'd
5,600.0	2,880.3	3,297.3	3,297.3	66.0	2,303.9	-69.81	-1,271.7	1,871.8	1,334.8	-990.7	2,325.51	0.574	Collision RiskProcedures Req'd
5,625.0	2,880.1	3,297.1	3,297.1	66.6	2,303.8	-79.58	-1,271.7	1,871.8	1,359.8	-965.7	2,325.42	0.585	Collision RiskProcedures Req'd
5,650.0	2,880.0	3,297.0	3,297.0	67.1	2,303.7	-82.98	-1,271.7	1,871.8	1,384.7	-940.6	2,325.34	0.595	Collision RiskProcedures Req'd
5,675.0	2,879.8	3,296.8	3,296.8	67.6	2,303.6	-84.69	-1,271.7	1,871.8	1,409.7	-915.6	2,325.28	0.606	Collision RiskProcedures Req'd
5,700.0	2,879.7	3,296.7	3,296.7	68.2	2,303.5	-85.72	-1,271.7	1,871.8	1,434.7	-890.6	2,325.23	0.617	Collision RiskProcedures Req'd
5,725.0	2,879.6	3,296.6	3,296.6	68.7	2,303.4	-86.42	-1,271.7	1,871.8	1,459.6	-865.6	2,325.17	0.628	Collision RiskProcedures Req'd
5,750.0	2,879.4	3,296.4	3,296.4	69.2	2,303.3	-86.91	-1,271.7	1,871.8	1,484.5	-840.7	2,325.11	0.638	Collision RiskProcedures Req'd
5,775.0	2,879.3	3,296.3	3,296.3	69.8	2,303.3	-87.28	-1,271.7	1,871.8	1,509.3	-815.8	2,325.07	0.649	Collision RiskProcedures Req'd
5,800.0	2,879.2	3,296.2	3,296.2	70.3	2,303.2	-87.57	-1,271.7	1,871.8	1,534.1	-790.9	2,325.04	0.660	Collision RiskProcedures Req'd
5,825.0	2,879.0	3,296.0	3,296.0	70.8	2,303.1	-87.81	-1,271.7	1,871.8	1,558.9	-766.1	2,324.99	0.671	Collision RiskProcedures Req'd
5,850.0	2,878.9	3,295.9	3,295.9	71.3	2,303.0	-88.00	-1,271.7	1,871.8	1,583.6	-741.3	2,324.96	0.681	Collision RiskProcedures Req'd
5,875.0	2,878.8	3,295.8	3,295.8	71.9	2,302.9	-88.16	-1,271.7	1,871.8	1,608.3	-716.6	2,324.93	0.692	Collision RiskProcedures Req'd
5,900.0	2,878.6	3,295.6	3,295.6	72.4	2,302.8	-88.30	-1,271.7	1,871.8	1,633.0	-692.0	2,324.91	0.702	Collision RiskProcedures Req'd
5,925.0	2,878.5	3,295.5	3,295.5	72.9	2,302.7	-88.42	-1,271.7	1,871.8	1,657.5	-667.4	2,324.88	0.713	Collision RiskProcedures Req'd
5,950.0	2,878.4	3,295.4	3,295.4	73.4	2,302.6	-88.52	-1,271.7	1,871.8	1,682.0	-642.8	2,324.86	0.724	Collision RiskProcedures Req'd
5,975.0	2,878.2	3,295.2	3,295.2	73.9	2,302.5	-88.61	-1,271.7	1,871.8	1,706.5	-618.4	2,324.85	0.734	Collision RiskProcedures Req'd
6,000.0	2,878.1	3,295.1	3,295.1	74.5	2,302.4	-88.70	-1,271.7	1,871.8	1,730.9	-594.0	2,324.85	0.745	Collision RiskProcedures Req'd
6,025.0	2,878.0	3,295.0	3,295.0	75.0	2,302.3	-88.77	-1,271.7	1,871.8	1,755.2	-569.6	2,324.84	0.755	Collision RiskProcedures Req'd
6,045.8	2,877.9	3,294.9	3,294.9	75.4	2,302.2	-88.82	-1,271.7	1,871.8	1,775.4	-549.4	2,324.84	0.764	Collision RiskProcedures Req'd
6,050.0	2,877.8	3,294.8	3,294.8	75.5	2,302.2	-88.82	-1,271.7	1,871.8	1,779.5	-545.4	2,324.84	0.765	Collision RiskProcedures Req'd
6,075.0	2,877.7	3,294.7	3,294.7	76.0	2,302.1	-88.80	-1,271.7	1,871.8	1,803.7	-521.1	2,324.84	0.776	Collision RiskProcedures Req'd
6,100.0	2,877.6	3,294.6	3,294.6	76.5	2,302.0	-88.79	-1,271.7	1,871.8	1,828.0	-496.9	2,324.83	0.786	Collision RiskProcedures Req'd
6,125.0	2,877.4	3,294.4	3,294.4	77.0	2,302.0	-88.77	-1,271.7	1,871.8	1,852.2	-472.6	2,324.83	0.797	Collision RiskProcedures Req'd
6,150.0	2,877.3	3,294.3	3,294.3	77.5	2,301.9	-88.75	-1,271.7	1,871.8	1,876.5	-448.3	2,324.82	0.807	Collision RiskProcedures Req'd
6,175.0	2,877.2	3,294.2	3,294.2	78.0	2,301.8	-88.73	-1,271.7	1,871.8	1,900.8	-424.0	2,324.81	0.818	Collision RiskProcedures Req'd
6,200.0	2,877.0	3,294.0	3,294.0	78.5	2,301.7	-88.72	-1,271.7	1,871.8	1,925.2	-399.6	2,324.80	0.828	Collision RiskProcedures Req'd
6,225.0	2,876.9	3,293.9	3,293.9	79.0	2,301.6	-88.70	-1,271.7	1,871.8	1,949.5	-375.3	2,324.79	0.839	Collision RiskProcedures Req'd
6,250.0	2,876.8	3,293.8	3,293.8	79.5	2,301.5	-88.68	-1,271.7	1,871.8	1,973.9	-350.9	2,324.78	0.849	Collision RiskProcedures Req'd
6,275.0	2,876.7	3,293.7	3,293.7	80.0	2,301.4	-88.67	-1,271.7	1,871.8	1,998.3	-326.5	2,324.76	0.860	Collision RiskProcedures Req'd
6,300.0	2,876.5	3,293.5	3,293.5	80.6	2,301.3	-88.65	-1,271.7	1,871.8	2,022.7	-302.1	2,324.74	0.870	Collision RiskProcedures Req'd
6,325.0	2,876.4	3,293.4	3,293.4	81.1	2,301.2	-88.63	-1,271.7	1,871.8	2,047.1	-277.6	2,324.72	0.881	Collision RiskProcedures Req'd
6,350.0	2,876.3	3,293.3	3,293.3	81.6	2,301.1	-88.62	-1,271.7	1,871.8	2,071.5	-253.2	2,324.70	0.891	Collision RiskProcedures Req'd
6,375.0	2,876.1	3,293.1	3,293.1	82.1	2,301.0	-88.60	-1,271.7	1,871.8	2,096.0	-228.7	2,324.68	0.902	Collision RiskProcedures Req'd

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.1	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - SOUTHERN UTE 005 - ST00 - ST00												Offset Site Error:	5.0 usft	
Survey Program: 8325-3_Blind										Rule Assigned:		Offset Well Error:		1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
6,400.0	2,876.0	3,293.0	3,293.0	82.6	2,300.9	-88.58	-1,271.7	1,871.8	2,120.4	-204.2	2,324.66	0.912	Collision RiskProcedures Req'd	
6,425.0	2,875.9	3,292.9	3,292.9	83.2	2,300.9	-88.56	-1,271.7	1,871.8	2,144.9	-179.8	2,324.63	0.923	Collision RiskProcedures Req'd	
6,450.0	2,875.7	3,292.7	3,292.7	83.7	2,300.8	-88.55	-1,271.7	1,871.8	2,169.4	-155.3	2,324.61	0.933	Collision RiskProcedures Req'd	
6,475.0	2,875.6	3,292.6	3,292.6	84.2	2,300.7	-88.53	-1,271.7	1,871.8	2,193.8	-130.7	2,324.58	0.944	Collision RiskProcedures Req'd	
6,500.0	2,875.5	3,292.5	3,292.5	84.7	2,300.6	-88.51	-1,271.7	1,871.8	2,218.3	-106.2	2,324.55	0.954	Collision RiskProcedures Req'd	
6,525.0	2,875.3	3,292.3	3,292.3	85.3	2,300.5	-88.50	-1,271.7	1,871.8	2,242.9	-81.7	2,324.53	0.965	Collision RiskProcedures Req'd	
6,550.0	2,875.2	3,292.2	3,292.2	85.8	2,300.4	-88.48	-1,271.7	1,871.8	2,267.4	-57.1	2,324.50	0.975	Collision RiskProcedures Req'd	
6,575.0	2,875.1	3,292.1	3,292.1	86.3	2,300.3	-88.46	-1,271.7	1,871.8	2,291.9	-32.6	2,324.47	0.986	Collision RiskProcedures Req'd	
6,600.0	2,875.0	3,292.0	3,292.0	86.8	2,300.2	-88.44	-1,271.7	1,871.8	2,316.5	-8.0	2,324.43	0.997	Collision RiskProcedures Req'd	
6,625.0	2,874.8	3,291.8	3,291.8	87.4	2,300.1	-88.43	-1,271.7	1,871.8	2,341.0	16.6	2,324.40	1.007	Collision RiskProcedures Req'd	
6,650.0	2,874.7	3,291.7	3,291.7	87.9	2,300.0	-88.41	-1,271.7	1,871.8	2,365.6	41.2	2,324.37	1.018	Collision RiskProcedures Req'd	
6,675.0	2,874.6	3,291.6	3,291.6	88.4	2,299.9	-88.39	-1,271.7	1,871.8	2,390.1	65.8	2,324.33	1.028	Collision RiskProcedures Req'd	
6,700.0	2,874.4	3,291.4	3,291.4	89.0	2,299.8	-88.38	-1,271.7	1,871.8	2,414.7	90.4	2,324.30	1.039	Collision RiskProcedures Req'd	
6,725.0	2,874.3	3,291.3	3,291.3	89.5	2,299.8	-88.36	-1,271.7	1,871.8	2,439.3	115.0	2,324.26	1.049	Collision RiskProcedures Req'd	
6,750.0	2,874.2	3,291.2	3,291.2	90.0	2,299.7	-88.34	-1,271.7	1,871.8	2,463.9	139.7	2,324.22	1.060	Collision RiskProcedures Req'd	
6,775.0	2,874.0	3,291.0	3,291.0	90.6	2,299.6	-88.32	-1,271.7	1,871.8	2,488.5	164.3	2,324.18	1.071	Collision RiskProcedures Req'd	
6,800.0	2,873.9	3,290.9	3,290.9	91.1	2,299.5	-88.31	-1,271.7	1,871.8	2,513.1	189.0	2,324.14	1.081	Collision RiskProcedures Req'd	
6,825.0	2,873.8	3,290.8	3,290.8	91.6	2,299.4	-88.29	-1,271.7	1,871.8	2,537.7	213.6	2,324.11	1.092	Collision RiskProcedures Req'd	
6,850.0	2,873.6	3,290.6	3,290.6	92.2	2,299.3	-88.27	-1,271.7	1,871.8	2,562.4	238.3	2,324.07	1.103	Collision RiskProcedures Req'd	
6,875.0	2,873.5	3,290.5	3,290.5	92.7	2,299.2	-88.26	-1,271.7	1,871.8	2,587.0	263.0	2,324.02	1.113	Collision RiskProcedures Req'd	
6,900.0	2,873.4	3,290.4	3,290.4	93.3	2,299.1	-88.24	-1,271.7	1,871.8	2,611.6	287.7	2,323.98	1.124	Collision RiskProcedures Req'd	
6,925.0	2,873.3	3,290.3	3,290.3	93.8	2,299.0	-88.22	-1,271.7	1,871.8	2,636.3	312.4	2,323.94	1.134	Collision RiskProcedures Req'd	
6,950.0	2,873.1	3,290.1	3,290.1	94.3	2,298.9	-88.20	-1,271.7	1,871.8	2,660.9	337.1	2,323.90	1.145	Collision RiskProcedures Req'd	
6,975.0	2,873.0	3,290.0	3,290.0	94.9	2,298.8	-88.19	-1,271.7	1,871.8	2,685.6	361.8	2,323.85	1.156	Collision RiskProcedures Req'd	
7,000.0	2,872.9	3,289.9	3,289.9	95.4	2,298.8	-88.17	-1,271.7	1,871.8	2,710.3	386.5	2,323.80	1.166	Collision RiskProcedures Req'd	
7,025.0	2,872.7	3,289.7	3,289.7	96.0	2,298.7	-88.15	-1,271.7	1,871.8	2,735.0	411.2	2,323.76	1.177	Collision RiskProcedures Req'd	
7,050.0	2,872.6	3,289.6	3,289.6	96.5	2,298.6	-88.14	-1,271.7	1,871.8	2,759.6	435.9	2,323.71	1.188	Collision RiskProcedures Req'd	
7,075.0	2,872.5	3,289.5	3,289.5	97.0	2,298.5	-88.12	-1,271.7	1,871.8	2,784.3	460.6	2,323.67	1.198	Collision RiskProcedures Req'd	
7,100.0	2,872.3	3,289.3	3,289.3	97.6	2,298.4	-88.10	-1,271.7	1,871.8	2,809.0	485.4	2,323.62	1.209	Collision RiskProcedures Req'd	
7,125.0	2,872.2	3,289.2	3,289.2	98.1	2,298.3	-88.09	-1,271.7	1,871.8	2,833.7	510.1	2,323.57	1.220	Collision RiskProcedures Req'd	
7,150.0	2,872.1	3,289.1	3,289.1	98.7	2,298.2	-88.07	-1,271.7	1,871.8	2,858.4	534.9	2,323.52	1.230	Collision RiskProcedures Req'd	
7,175.0	2,871.9	3,288.9	3,288.9	99.2	2,298.1	-88.05	-1,271.7	1,871.8	2,883.1	559.6	2,323.47	1.241	Collision RiskProcedures Req'd	
7,200.0	2,871.8	3,288.8	3,288.8	99.8	2,298.0	-88.03	-1,271.7	1,871.8	2,907.8	584.4	2,323.42	1.252	Collision RiskProcedures Req'd	
7,225.0	2,871.7	3,288.7	3,288.7	100.3	2,297.9	-88.02	-1,271.7	1,871.8	2,932.5	609.2	2,323.37	1.262	Collision RiskProcedures Req'd	
7,250.0	2,871.5	3,288.5	3,288.5	100.9	2,297.8	-88.00	-1,271.7	1,871.8	2,957.3	633.9	2,323.32	1.273	Collision RiskProcedures Req'd	
7,275.0	2,871.4	3,288.4	3,288.4	101.4	2,297.7	-87.98	-1,271.7	1,871.8	2,982.0	658.7	2,323.27	1.284	Collision RiskProcedures Req'd	
7,300.0	2,871.3	3,288.3	3,288.3	102.0	2,297.7	-87.97	-1,271.7	1,871.8	3,006.7	683.5	2,323.22	1.294	Collision RiskProcedures Req'd	
7,325.0	2,871.2	3,288.2	3,288.2	102.5	2,297.6	-87.95	-1,271.7	1,871.8	3,031.4	708.3	2,323.17	1.305	Collision RiskProcedures Req'd	
7,350.0	2,871.0	3,288.0	3,288.0	103.1	2,297.5	-87.93	-1,271.7	1,871.8	3,056.2	733.1	2,323.12	1.316	Collision RiskProcedures Req'd	
7,375.0	2,870.9	3,287.9	3,287.9	103.6	2,297.4	-87.91	-1,271.7	1,871.8	3,080.9	757.9	2,323.06	1.326	Collision RiskProcedures Req'd	
7,400.0	2,870.8	3,287.8	3,287.8	104.2	2,297.3	-87.90	-1,271.7	1,871.8	3,105.7	782.7	2,323.01	1.337	Collision RiskProcedures Req'd	
7,425.0	2,870.6	3,287.6	3,287.6	104.8	2,297.2	-87.88	-1,271.7	1,871.8	3,130.4	807.5	2,322.96	1.348	Collision RiskProcedures Req'd	
7,450.0	2,870.5	3,287.5	3,287.5	105.3	2,297.1	-87.86	-1,271.7	1,871.8	3,155.2	832.3	2,322.90	1.358	Collision RiskProcedures Req'd	
7,475.0	2,870.4	3,287.4	3,287.4	105.9	2,297.0	-87.85	-1,271.7	1,871.8	3,179.9	857.1	2,322.85	1.369	Collision RiskProcedures Req'd	
7,500.0	2,870.2	3,287.2	3,287.2	106.4	2,296.9	-87.83	-1,271.7	1,871.8	3,204.7	881.9	2,322.79	1.380	Collision RiskProcedures Req'd	
7,525.0	2,870.1	3,287.1	3,287.1	107.0	2,296.8	-87.81	-1,271.7	1,871.8	3,229.5	906.7	2,322.74	1.390	Collision RiskProcedures Req'd	
7,545.8	2,870.0	3,287.0	3,287.0	107.4	2,296.8	-87.80	-1,271.7	1,871.8	3,250.1	927.4	2,322.69	1.399	Collision RiskProcedures Req'd	

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.1	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - SOUTHERN UTE 005A - ST00 - ST00													Offset Site Error:	5.0 usft
Survey Program: 5719-3_Blind											Rule Assigned:		Offset Well Error:	1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	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)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
3,350.0	2,823.1	2,875.1	2,875.1	27.7	2,007.3	-46.93	-429.1	5,133.6	3,910.8	1,885.5	2,025.24	1.931	Collision RiskProcedures Req'd	
3,375.0	2,833.5	2,885.5	2,885.5	28.0	2,014.6	-54.21	-429.1	5,133.6	3,890.5	1,857.7	2,032.87	1.914	Collision RiskProcedures Req'd	
3,393.0	2,840.8	2,892.8	2,892.8	28.3	2,019.6	-58.78	-429.1	5,133.6	3,875.1	1,836.9	2,038.21	1.901	Collision RiskProcedures Req'd	
3,400.0	2,843.6	2,895.6	2,895.6	28.3	2,021.6	-59.53	-429.1	5,133.6	3,869.8	1,829.6	2,040.17	1.897	Collision RiskProcedures Req'd	
3,425.0	2,852.9	2,904.9	2,904.9	28.5	2,028.1	-62.30	-429.1	5,133.6	3,850.5	1,803.7	2,046.79	1.881	Collision RiskProcedures Req'd	
3,450.0	2,861.2	2,913.2	2,913.2	28.7	2,033.9	-65.21	-429.1	5,133.6	3,830.9	1,778.2	2,052.73	1.866	Collision RiskProcedures Req'd	
3,475.0	2,868.5	2,920.5	2,920.5	28.9	2,039.0	-68.27	-429.1	5,133.6	3,811.1	1,753.1	2,057.98	1.852	Collision RiskProcedures Req'd	
3,500.0	2,874.7	2,926.7	2,926.7	29.1	2,043.3	-71.45	-429.1	5,133.6	3,791.1	1,728.6	2,062.52	1.838	Collision RiskProcedures Req'd	
3,525.0	2,880.0	2,932.0	2,932.0	29.3	2,047.0	-74.73	-429.1	5,133.6	3,771.0	1,704.7	2,066.36	1.825	Collision RiskProcedures Req'd	
3,550.0	2,884.2	2,936.2	2,936.2	29.6	2,049.9	-78.08	-429.1	5,133.6	3,750.8	1,681.3	2,069.47	1.812	Collision RiskProcedures Req'd	
3,575.0	2,887.4	2,939.4	2,939.4	29.8	2,052.2	-81.49	-429.1	5,133.6	3,730.5	1,658.6	2,071.87	1.801	Collision RiskProcedures Req'd	
3,600.0	2,889.5	2,941.5	2,941.5	30.1	2,053.6	-84.91	-429.1	5,133.6	3,710.2	1,636.6	2,073.54	1.789	Collision RiskProcedures Req'd	
3,625.0	2,890.5	2,942.5	2,942.5	30.3	2,054.4	-88.32	-429.1	5,133.6	3,689.9	1,615.4	2,074.48	1.779	Collision RiskProcedures Req'd	
3,640.6	2,890.6	2,942.6	2,942.6	30.5	2,054.4	-90.42	-429.1	5,133.6	3,677.2	1,602.5	2,074.70	1.772	Collision RiskProcedures Req'd	
3,650.0	2,890.6	2,942.6	2,942.6	30.6	2,054.4	-90.42	-429.1	5,133.6	3,669.6	1,594.8	2,074.75	1.769	Collision RiskProcedures Req'd	
3,675.0	2,890.5	2,942.5	2,942.5	30.9	2,054.3	-90.41	-429.1	5,133.6	3,649.4	1,574.5	2,074.88	1.759	Collision RiskProcedures Req'd	
3,700.0	2,890.3	2,942.3	2,942.3	31.2	2,054.2	-90.41	-429.1	5,133.6	3,629.2	1,554.2	2,075.01	1.749	Collision RiskProcedures Req'd	
3,725.0	2,890.2	2,942.2	2,942.2	31.5	2,054.1	-90.41	-429.1	5,133.6	3,609.1	1,533.9	2,075.17	1.739	Collision RiskProcedures Req'd	
3,750.0	2,890.1	2,942.1	2,942.1	31.8	2,054.0	-90.40	-429.1	5,133.6	3,589.1	1,513.7	2,075.33	1.729	Collision RiskProcedures Req'd	
3,775.0	2,889.9	2,941.9	2,941.9	32.1	2,054.0	-90.40	-429.1	5,133.6	3,569.1	1,493.6	2,075.49	1.720	Collision RiskProcedures Req'd	
3,800.0	2,889.8	2,941.8	2,941.8	32.4	2,053.9	-90.40	-429.1	5,133.6	3,549.2	1,473.5	2,075.65	1.710	Collision RiskProcedures Req'd	
3,825.0	2,889.7	2,941.7	2,941.7	32.8	2,053.8	-90.39	-429.1	5,133.6	3,529.3	1,453.5	2,075.84	1.700	Collision RiskProcedures Req'd	
3,850.0	2,889.5	2,941.5	2,941.5	33.1	2,053.7	-90.39	-429.1	5,133.6	3,509.5	1,433.5	2,076.03	1.691	Collision RiskProcedures Req'd	
3,875.0	2,889.4	2,941.4	2,941.4	33.5	2,053.6	-90.39	-429.1	5,133.6	3,489.8	1,413.6	2,076.23	1.681	Collision RiskProcedures Req'd	
3,900.0	2,889.3	2,941.3	2,941.3	33.8	2,053.5	-90.38	-429.1	5,133.6	3,470.2	1,393.8	2,076.43	1.671	Collision RiskProcedures Req'd	
3,925.0	2,889.1	2,941.1	2,941.1	34.2	2,053.4	-90.38	-429.1	5,133.6	3,450.6	1,374.0	2,076.65	1.662	Collision RiskProcedures Req'd	
3,950.0	2,889.0	2,941.0	2,941.0	34.5	2,053.3	-90.37	-429.1	5,133.6	3,431.1	1,354.2	2,076.87	1.652	Collision RiskProcedures Req'd	
3,975.0	2,888.9	2,940.9	2,940.9	34.9	2,053.2	-90.37	-429.1	5,133.6	3,411.7	1,334.6	2,077.10	1.643	Collision RiskProcedures Req'd	
4,000.0	2,888.8	2,940.8	2,940.8	35.3	2,053.1	-90.37	-429.1	5,133.6	3,392.3	1,315.0	2,077.33	1.633	Collision RiskProcedures Req'd	
4,025.0	2,888.6	2,940.6	2,940.6	35.7	2,053.0	-90.36	-429.1	5,133.6	3,373.0	1,295.4	2,077.59	1.624	Collision RiskProcedures Req'd	
4,050.0	2,888.5	2,940.5	2,940.5	36.0	2,052.9	-90.36	-429.1	5,133.6	3,353.8	1,276.0	2,077.84	1.614	Collision RiskProcedures Req'd	
4,075.0	2,888.4	2,940.4	2,940.4	36.4	2,052.9	-90.36	-429.1	5,133.6	3,334.7	1,256.6	2,078.10	1.605	Collision RiskProcedures Req'd	
4,100.0	2,888.2	2,940.2	2,940.2	36.8	2,052.8	-90.35	-429.1	5,133.6	3,315.6	1,237.2	2,078.37	1.595	Collision RiskProcedures Req'd	
4,125.0	2,888.1	2,940.1	2,940.1	37.2	2,052.7	-90.35	-429.1	5,133.6	3,296.6	1,218.0	2,078.66	1.586	Collision RiskProcedures Req'd	
4,150.0	2,888.0	2,940.0	2,940.0	37.6	2,052.6	-90.35	-429.1	5,133.6	3,277.7	1,198.8	2,078.94	1.577	Collision RiskProcedures Req'd	
4,175.0	2,887.8	2,939.8	2,939.8	38.0	2,052.5	-90.34	-429.1	5,133.6	3,258.9	1,179.7	2,079.24	1.567	Collision RiskProcedures Req'd	
4,200.0	2,887.7	2,939.7	2,939.7	38.4	2,052.4	-90.34	-429.1	5,133.6	3,240.2	1,160.7	2,079.54	1.558	Collision RiskProcedures Req'd	
4,225.0	2,887.6	2,939.6	2,939.6	38.9	2,052.3	-90.34	-429.1	5,133.6	3,221.5	1,141.7	2,079.85	1.549	Collision RiskProcedures Req'd	
4,250.0	2,887.4	2,939.4	2,939.4	39.3	2,052.2	-90.33	-429.1	5,133.6	3,203.0	1,122.8	2,080.18	1.540	Collision RiskProcedures Req'd	
4,275.0	2,887.3	2,939.3	2,939.3	39.7	2,052.1	-90.33	-429.1	5,133.6	3,184.5	1,104.0	2,080.50	1.531	Collision RiskProcedures Req'd	
4,300.0	2,887.2	2,939.2	2,939.2	40.1	2,052.0	-90.33	-429.1	5,133.6	3,166.1	1,085.3	2,080.83	1.522	Collision RiskProcedures Req'd	
4,325.0	2,887.0	2,939.0	2,939.0	40.6	2,051.9	-90.32	-429.1	5,133.6	3,147.8	1,066.7	2,081.18	1.513	Collision RiskProcedures Req'd	
4,350.0	2,886.9	2,938.9	2,938.9	41.0	2,051.8	-90.32	-429.1	5,133.6	3,129.6	1,048.1	2,081.53	1.504	Collision RiskProcedures Req'd	
4,375.0	2,886.8	2,938.8	2,938.8	41.5	2,051.7	-90.32	-429.1	5,133.6	3,111.5	1,029.6	2,081.89	1.495	Collision RiskProcedures Req'd	
4,400.0	2,886.6	2,938.6	2,938.6	41.9	2,051.7	-90.31	-429.1	5,133.6	3,093.5	1,011.3	2,082.25	1.486	Collision RiskProcedures Req'd	
4,425.0	2,886.5	2,938.5	2,938.5	42.4	2,051.6	-90.31	-429.1	5,133.6	3,075.6	993.0	2,082.63	1.477	Collision RiskProcedures Req'd	
4,450.0	2,886.4	2,938.4	2,938.4	42.8	2,051.5	-90.30	-429.1	5,133.6	3,057.8	974.8	2,083.02	1.468	Collision RiskProcedures Req'd	
4,475.0	2,886.2	2,938.2	2,938.2	43.3	2,051.4	-90.30	-429.1	5,133.6	3,040.1	956.7	2,083.40	1.459	Collision RiskProcedures Req'd	
4,500.0	2,886.1	2,938.1	2,938.1	43.7	2,051.3	-90.30	-429.1	5,133.6	3,022.5	938.7	2,083.80	1.450	Collision RiskProcedures Req'd	
4,525.0	2,886.0	2,938.0	2,938.0	44.2	2,051.2	-90.29	-429.1	5,133.6	3,005.0	920.8	2,084.21	1.442	Collision RiskProcedures Req'd	
4,550.0	2,885.9	2,937.9	2,937.9	44.7	2,051.1	-90.29	-429.1	5,133.6	2,987.6	903.0	2,084.62	1.433	Collision RiskProcedures Req'd	
4,575.0	2,885.7	2,937.7	2,937.7	45.1	2,051.0	-90.29	-429.1	5,133.6	2,970.3	885.3	2,085.04	1.425	Collision RiskProcedures Req'd	

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.1	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - SOUTHERN UTE 005A - ST00 - ST00											Offset Site Error:	5.0 usft	
Survey Program: 5719-3_Blind											Offset Well Error:	1.0 usft	
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
4,600.0	2,885.6	2,937.6	2,937.6	45.6	2,050.9	-90.28	-429.1	5,133.6	2,953.1	867.7	2,085.47	1.416	Collision RiskProcedures Req'd
4,625.0	2,885.5	2,937.5	2,937.5	46.1	2,050.8	-90.28	-429.1	5,133.6	2,936.1	850.2	2,085.90	1.408	Collision RiskProcedures Req'd
4,650.0	2,885.3	2,937.3	2,937.3	46.5	2,050.7	-90.28	-429.1	5,133.6	2,919.1	832.8	2,086.35	1.399	Collision RiskProcedures Req'd
4,675.0	2,885.2	2,937.2	2,937.2	47.0	2,050.6	-90.27	-429.1	5,133.6	2,902.3	815.5	2,086.80	1.391	Collision RiskProcedures Req'd
4,700.0	2,885.1	2,937.1	2,937.1	47.5	2,050.6	-90.27	-429.1	5,133.6	2,885.6	798.3	2,087.25	1.382	Collision RiskProcedures Req'd
4,725.0	2,884.9	2,936.9	2,936.9	48.0	2,050.5	-90.27	-429.1	5,133.6	2,869.0	781.3	2,087.72	1.374	Collision RiskProcedures Req'd
4,750.0	2,884.8	2,936.8	2,936.8	48.5	2,050.4	-90.26	-429.1	5,133.6	2,852.5	764.3	2,088.19	1.366	Collision RiskProcedures Req'd
4,775.0	2,884.7	2,936.7	2,936.7	48.9	2,050.3	-90.26	-429.1	5,133.6	2,836.2	747.5	2,088.67	1.358	Collision RiskProcedures Req'd
4,800.0	2,884.5	2,936.5	2,936.5	49.4	2,050.2	-90.26	-429.1	5,133.6	2,820.0	730.8	2,089.16	1.350	Collision RiskProcedures Req'd
4,825.0	2,884.4	2,936.4	2,936.4	49.9	2,050.1	-90.25	-429.1	5,133.6	2,803.9	714.2	2,089.65	1.342	Collision RiskProcedures Req'd
4,850.0	2,884.3	2,936.3	2,936.3	50.4	2,050.0	-90.25	-429.1	5,133.6	2,787.9	697.7	2,090.16	1.334	Collision RiskProcedures Req'd
4,875.0	2,884.1	2,936.1	2,936.1	50.9	2,049.9	-90.25	-429.1	5,133.6	2,772.1	681.4	2,090.66	1.326	Collision RiskProcedures Req'd
4,900.0	2,884.0	2,936.0	2,936.0	51.4	2,049.8	-90.24	-429.1	5,133.6	2,756.4	665.2	2,091.18	1.318	Collision RiskProcedures Req'd
4,925.0	2,883.9	2,935.9	2,935.9	51.9	2,049.7	-90.24	-429.1	5,133.6	2,740.8	649.1	2,091.70	1.310	Collision RiskProcedures Req'd
4,950.0	2,883.7	2,935.7	2,935.7	52.4	2,049.6	-90.23	-429.1	5,133.6	2,725.4	633.2	2,092.23	1.303	Collision RiskProcedures Req'd
4,975.0	2,883.6	2,935.6	2,935.6	52.9	2,049.5	-90.23	-429.1	5,133.6	2,710.2	617.4	2,092.77	1.295	Collision RiskProcedures Req'd
5,000.0	2,883.5	2,935.5	2,935.5	53.4	2,049.4	-90.23	-429.1	5,133.6	2,695.0	601.7	2,093.31	1.287	Collision RiskProcedures Req'd
5,025.0	2,883.4	2,935.4	2,935.4	53.9	2,049.4	-90.22	-429.1	5,133.6	2,680.1	586.2	2,093.86	1.280	Collision RiskProcedures Req'd
5,050.0	2,883.2	2,935.2	2,935.2	54.4	2,049.3	-90.22	-429.1	5,133.6	2,665.2	570.8	2,094.42	1.273	Collision RiskProcedures Req'd
5,075.0	2,883.1	2,935.1	2,935.1	54.9	2,049.2	-90.22	-429.1	5,133.6	2,650.6	555.6	2,094.98	1.265	Collision RiskProcedures Req'd
5,100.0	2,883.0	2,935.0	2,935.0	55.4	2,049.1	-90.21	-429.1	5,133.6	2,636.1	540.5	2,095.55	1.258	Collision RiskProcedures Req'd
5,117.3	2,882.9	2,934.9	2,934.9	55.8	2,049.0	-90.21	-429.1	5,133.6	2,626.1	530.2	2,095.95	1.253	Collision RiskProcedures Req'd
5,125.0	2,882.8	2,934.8	2,934.8	55.9	2,049.0	-90.21	-429.1	5,133.6	2,621.7	525.6	2,096.12	1.251	Collision RiskProcedures Req'd
5,150.0	2,882.7	2,934.7	2,934.7	56.5	2,048.9	-90.22	-429.1	5,133.6	2,607.2	510.5	2,096.70	1.243	Collision RiskProcedures Req'd
5,175.0	2,882.6	2,934.6	2,934.6	57.0	2,048.8	-90.22	-429.1	5,133.6	2,592.6	495.4	2,097.27	1.236	Collision RiskProcedures Req'd
5,200.0	2,882.4	2,934.4	2,934.4	57.5	2,048.7	-90.23	-429.1	5,133.6	2,577.9	480.0	2,097.85	1.229	Collision RiskProcedures Req'd
5,225.0	2,882.3	2,934.3	2,934.3	58.0	2,048.6	-90.23	-429.1	5,133.6	2,563.0	464.5	2,098.43	1.221	Collision RiskProcedures Req'd
5,250.0	2,882.2	2,934.2	2,934.2	58.5	2,048.5	-90.23	-429.1	5,133.6	2,547.9	448.9	2,099.00	1.214	Collision RiskProcedures Req'd
5,275.0	2,882.0	2,934.0	2,934.0	59.1	2,048.4	-90.24	-429.1	5,133.6	2,532.7	433.1	2,099.58	1.206	Collision RiskProcedures Req'd
5,300.0	2,881.9	2,933.9	2,933.9	59.6	2,048.3	-90.24	-429.1	5,133.6	2,517.4	417.2	2,100.16	1.199	Collision RiskProcedures Req'd
5,325.0	2,881.8	2,933.8	2,933.8	60.1	2,048.2	-90.25	-429.1	5,133.6	2,501.9	401.2	2,100.72	1.191	Collision RiskProcedures Req'd
5,350.0	2,881.6	2,933.6	2,933.6	60.6	2,048.1	-90.25	-429.1	5,133.6	2,486.2	384.9	2,101.30	1.183	Collision RiskProcedures Req'd
5,375.0	2,881.5	2,933.5	2,933.5	61.2	2,048.1	-90.26	-429.1	5,133.6	2,470.4	368.6	2,101.87	1.175	Collision RiskProcedures Req'd
5,400.0	2,881.3	2,933.3	2,933.3	61.7	2,048.0	-90.26	-429.1	5,133.6	2,454.5	352.1	2,102.44	1.167	Collision RiskProcedures Req'd
5,425.0	2,881.2	2,933.2	2,933.2	62.3	2,047.9	-90.26	-429.1	5,133.6	2,438.4	335.4	2,103.01	1.160	Collision RiskProcedures Req'd
5,450.0	2,881.1	2,933.1	2,933.1	62.8	2,047.8	-90.27	-429.1	5,133.6	2,422.2	318.7	2,103.57	1.151	Collision RiskProcedures Req'd
5,475.0	2,880.9	2,932.9	2,932.9	63.3	2,047.7	-90.27	-429.1	5,133.6	2,405.9	301.7	2,104.14	1.143	Collision RiskProcedures Req'd
5,500.0	2,880.8	2,932.8	2,932.8	63.9	2,047.6	-90.28	-429.1	5,133.6	2,389.4	284.7	2,104.71	1.135	Collision RiskProcedures Req'd
5,525.0	2,880.7	2,932.7	2,932.7	64.4	2,047.5	-90.28	-429.1	5,133.6	2,372.7	267.5	2,105.27	1.127	Collision RiskProcedures Req'd
5,550.0	2,880.5	2,932.5	2,932.5	64.9	2,047.4	-90.29	-429.1	5,133.6	2,356.0	250.1	2,105.83	1.119	Collision RiskProcedures Req'd
5,575.0	2,880.4	2,932.4	2,932.4	65.5	2,047.3	-90.29	-429.1	5,133.6	2,339.1	232.7	2,106.39	1.110	Collision RiskProcedures Req'd
5,600.0	2,880.3	2,932.3	2,932.3	66.0	2,047.2	-90.29	-429.1	5,133.6	2,322.0	215.1	2,106.95	1.102	Collision RiskProcedures Req'd
5,625.0	2,880.1	2,932.1	2,932.1	66.6	2,047.1	-90.30	-429.1	5,133.6	2,304.8	197.3	2,107.50	1.094	Collision RiskProcedures Req'd
5,650.0	2,880.0	2,932.0	2,932.0	67.1	2,047.0	-90.30	-429.1	5,133.6	2,287.5	179.5	2,108.05	1.085	Collision RiskProcedures Req'd
5,675.0	2,879.8	2,931.8	2,931.8	67.6	2,046.9	-90.31	-429.1	5,133.6	2,270.1	161.5	2,108.60	1.077	Collision RiskProcedures Req'd
5,700.0	2,879.7	2,931.7	2,931.7	68.2	2,046.8	-90.31	-429.1	5,133.6	2,252.5	143.3	2,109.16	1.068	Collision RiskProcedures Req'd
5,725.0	2,879.6	2,931.6	2,931.6	68.7	2,046.7	-90.32	-429.1	5,133.6	2,234.8	125.1	2,109.69	1.059	Collision RiskProcedures Req'd
5,750.0	2,879.4	2,931.4	2,931.4	69.2	2,046.6	-90.32	-429.1	5,133.6	2,216.9	106.7	2,110.23	1.051	Collision RiskProcedures Req'd
5,775.0	2,879.3	2,931.3	2,931.3	69.8	2,046.5	-90.32	-429.1	5,133.6	2,198.9	88.2	2,110.78	1.042	Collision RiskProcedures Req'd
5,800.0	2,879.2	2,931.2	2,931.2	70.3	2,046.4	-90.33	-429.1	5,133.6	2,180.8	69.5	2,111.32	1.033	Collision RiskProcedures Req'd
5,825.0	2,879.0	2,931.0	2,931.0	70.8	2,046.3	-90.33	-429.1	5,133.6	2,162.6	50.8	2,111.85	1.024	Collision RiskProcedures Req'd
5,850.0	2,878.9	2,930.9	2,930.9	71.3	2,046.2	-90.34	-429.1	5,133.6	2,144.3	31.9	2,112.37	1.015	Collision RiskProcedures Req'd

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.1	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - SOUTHERN UTE 005A - ST00 - ST00												Offset Site Error:	5.0 usft	
Survey Program: 5719-3_Blind										Rule Assigned:		Offset Well Error:		1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,875.0	2,878.8	2,930.8	2,930.8	71.9	2,046.2	-90.34	-429.1	5,133.6	2,125.8	12.9	2,112.90	1.006	Collision RiskProcedures Req'd	
5,900.0	2,878.6	2,930.6	2,930.6	72.4	2,046.1	-90.34	-429.1	5,133.6	2,107.2	-6.3	2,113.44	0.997	Collision RiskProcedures Req'd	
5,925.0	2,878.5	2,930.5	2,930.5	72.9	2,046.0	-90.35	-429.1	5,133.6	2,088.4	-25.5	2,113.95	0.988	Collision RiskProcedures Req'd	
5,950.0	2,878.4	2,930.4	2,930.4	73.4	2,045.9	-90.35	-429.1	5,133.6	2,069.6	-44.9	2,114.47	0.979	Collision RiskProcedures Req'd	
5,975.0	2,878.2	2,930.2	2,930.2	73.9	2,045.8	-90.36	-429.1	5,133.6	2,050.6	-64.4	2,114.99	0.970	Collision RiskProcedures Req'd	
6,000.0	2,878.1	2,930.1	2,930.1	74.5	2,045.7	-90.36	-429.1	5,133.6	2,031.5	-84.0	2,115.51	0.960	Collision RiskProcedures Req'd	
6,025.0	2,878.0	2,930.0	2,930.0	75.0	2,045.6	-90.36	-429.1	5,133.6	2,012.3	-103.7	2,116.01	0.951	Collision RiskProcedures Req'd	
6,045.8	2,877.9	2,929.9	2,929.9	75.4	2,045.5	-90.37	-429.1	5,133.6	1,996.2	-120.2	2,116.44	0.943	Collision RiskProcedures Req'd	
6,050.0	2,877.8	2,929.8	2,929.8	75.5	2,045.5	-90.37	-429.1	5,133.6	1,993.0	-123.5	2,116.52	0.942	Collision RiskProcedures Req'd	
6,075.0	2,877.7	2,929.7	2,929.7	76.0	2,045.4	-90.36	-429.1	5,133.6	1,973.7	-143.3	2,117.03	0.932	Collision RiskProcedures Req'd	
6,100.0	2,877.6	2,929.6	2,929.6	76.5	2,045.3	-90.35	-429.1	5,133.6	1,954.6	-162.9	2,117.55	0.923	Collision RiskProcedures Req'd	
6,125.0	2,877.4	2,929.4	2,929.4	77.0	2,045.2	-90.35	-429.1	5,133.6	1,935.6	-182.5	2,118.07	0.914	Collision RiskProcedures Req'd	
6,150.0	2,877.3	2,929.3	2,929.3	77.5	2,045.1	-90.34	-429.1	5,133.6	1,916.7	-201.9	2,118.60	0.905	Collision RiskProcedures Req'd	
6,175.0	2,877.2	2,929.2	2,929.2	78.0	2,045.0	-90.34	-429.1	5,133.6	1,898.0	-221.2	2,119.14	0.896	Collision RiskProcedures Req'd	
6,200.0	2,877.0	2,929.0	2,929.0	78.5	2,045.0	-90.33	-429.1	5,133.6	1,879.4	-240.3	2,119.69	0.887	Collision RiskProcedures Req'd	
6,225.0	2,876.9	2,928.9	2,928.9	79.0	2,044.9	-90.32	-429.1	5,133.6	1,860.9	-259.3	2,120.24	0.878	Collision RiskProcedures Req'd	
6,250.0	2,876.8	2,928.8	2,928.8	79.5	2,044.8	-90.32	-429.1	5,133.6	1,842.7	-278.1	2,120.80	0.869	Collision RiskProcedures Req'd	
6,275.0	2,876.7	2,928.7	2,928.7	80.0	2,044.7	-90.31	-429.1	5,133.6	1,824.5	-296.8	2,121.37	0.860	Collision RiskProcedures Req'd	
6,300.0	2,876.5	2,928.5	2,928.5	80.6	2,044.6	-90.31	-429.1	5,133.6	1,806.6	-315.4	2,121.95	0.851	Collision RiskProcedures Req'd	
6,325.0	2,876.4	2,928.4	2,928.4	81.1	2,044.5	-90.30	-429.1	5,133.6	1,788.8	-333.8	2,122.53	0.843	Collision RiskProcedures Req'd	
6,350.0	2,876.3	2,928.3	2,928.3	81.6	2,044.4	-90.30	-429.1	5,133.6	1,771.2	-352.0	2,123.12	0.834	Collision RiskProcedures Req'd	
6,375.0	2,876.1	2,928.1	2,928.1	82.1	2,044.3	-90.29	-429.1	5,133.6	1,753.7	-370.0	2,123.72	0.826	Collision RiskProcedures Req'd	
6,400.0	2,876.0	2,928.0	2,928.0	82.6	2,044.2	-90.28	-429.1	5,133.6	1,736.5	-387.9	2,124.32	0.817	Collision RiskProcedures Req'd	
6,425.0	2,875.9	2,927.9	2,927.9	83.2	2,044.1	-90.28	-429.1	5,133.6	1,719.4	-405.5	2,124.93	0.809	Collision RiskProcedures Req'd	
6,450.0	2,875.7	2,927.7	2,927.7	83.7	2,044.0	-90.27	-429.1	5,133.6	1,702.5	-423.0	2,125.54	0.801	Collision RiskProcedures Req'd	
6,475.0	2,875.6	2,927.6	2,927.6	84.2	2,043.9	-90.27	-429.1	5,133.6	1,685.9	-440.3	2,126.16	0.793	Collision RiskProcedures Req'd	
6,500.0	2,875.5	2,927.5	2,927.5	84.7	2,043.9	-90.26	-429.1	5,133.6	1,669.4	-457.4	2,126.78	0.785	Collision RiskProcedures Req'd	
6,525.0	2,875.3	2,927.3	2,927.3	85.3	2,043.8	-90.25	-429.1	5,133.6	1,653.2	-474.2	2,127.41	0.777	Collision RiskProcedures Req'd	
6,550.0	2,875.2	2,927.2	2,927.2	85.8	2,043.7	-90.25	-429.1	5,133.6	1,637.2	-490.9	2,128.04	0.769	Collision RiskProcedures Req'd	
6,575.0	2,875.1	2,927.1	2,927.1	86.3	2,043.6	-90.24	-429.1	5,133.6	1,621.4	-507.3	2,128.68	0.762	Collision RiskProcedures Req'd	
6,600.0	2,875.0	2,927.0	2,927.0	86.8	2,043.5	-90.24	-429.1	5,133.6	1,605.8	-523.5	2,129.32	0.754	Collision RiskProcedures Req'd	
6,625.0	2,874.8	2,926.8	2,926.8	87.4	2,043.4	-90.23	-429.1	5,133.6	1,590.5	-539.5	2,129.96	0.747	Collision RiskProcedures Req'd	
6,650.0	2,874.7	2,926.7	2,926.7	87.9	2,043.3	-90.22	-429.1	5,133.6	1,575.4	-555.2	2,130.60	0.739	Collision RiskProcedures Req'd	
6,675.0	2,874.6	2,926.6	2,926.6	88.4	2,043.2	-90.22	-429.1	5,133.6	1,560.6	-570.7	2,131.25	0.732	Collision RiskProcedures Req'd	
6,700.0	2,874.4	2,926.4	2,926.4	89.0	2,043.1	-90.21	-429.1	5,133.6	1,546.0	-585.9	2,131.89	0.725	Collision RiskProcedures Req'd	
6,725.0	2,874.3	2,926.3	2,926.3	89.5	2,043.0	-90.21	-429.1	5,133.6	1,531.7	-600.8	2,132.53	0.718	Collision RiskProcedures Req'd	
6,750.0	2,874.2	2,926.2	2,926.2	90.0	2,042.9	-90.20	-429.1	5,133.6	1,517.7	-615.4	2,133.18	0.711	Collision RiskProcedures Req'd	
6,775.0	2,874.0	2,926.0	2,926.0	90.6	2,042.9	-90.19	-429.1	5,133.6	1,504.0	-629.8	2,133.81	0.705	Collision RiskProcedures Req'd	
6,800.0	2,873.9	2,925.9	2,925.9	91.1	2,042.8	-90.19	-429.1	5,133.6	1,490.6	-643.9	2,134.45	0.698	Collision RiskProcedures Req'd	
6,825.0	2,873.8	2,925.8	2,925.8	91.6	2,042.7	-90.18	-429.1	5,133.6	1,477.4	-657.6	2,135.08	0.692	Collision RiskProcedures Req'd	
6,850.0	2,873.6	2,925.6	2,925.6	92.2	2,042.6	-90.18	-429.1	5,133.6	1,464.6	-671.1	2,135.71	0.686	Collision RiskProcedures Req'd	
6,875.0	2,873.5	2,925.5	2,925.5	92.7	2,042.5	-90.17	-429.1	5,133.6	1,452.1	-684.2	2,136.33	0.680	Collision RiskProcedures Req'd	
6,900.0	2,873.4	2,925.4	2,925.4	93.3	2,042.4	-90.16	-429.1	5,133.6	1,439.9	-697.0	2,136.94	0.674	Collision RiskProcedures Req'd	
6,925.0	2,873.3	2,925.3	2,925.3	93.8	2,042.3	-90.16	-429.1	5,133.6	1,428.1	-709.4	2,137.55	0.668	Collision RiskProcedures Req'd	
6,950.0	2,873.1	2,925.1	2,925.1	94.3	2,042.2	-90.15	-429.1	5,133.6	1,416.6	-721.5	2,138.14	0.663	Collision RiskProcedures Req'd	
6,975.0	2,873.0	2,925.0	2,925.0	94.9	2,042.1	-90.15	-429.1	5,133.6	1,405.4	-733.3	2,138.73	0.657	Collision RiskProcedures Req'd	
7,000.0	2,872.9	2,924.9	2,924.9	95.4	2,042.0	-90.14	-429.1	5,133.6	1,394.7	-744.6	2,139.30	0.652	Collision RiskProcedures Req'd	
7,025.0	2,872.7	2,924.7	2,924.7	96.0	2,041.9	-90.13	-429.1	5,133.6	1,384.2	-755.6	2,139.85	0.647	Collision RiskProcedures Req'd	
7,050.0	2,872.6	2,924.6	2,924.6	96.5	2,041.8	-90.13	-429.1	5,133.6	1,374.2	-766.2	2,140.39	0.642	Collision RiskProcedures Req'd	
7,075.0	2,872.5	2,924.5	2,924.5	97.0	2,041.8	-90.12	-429.1	5,133.6	1,364.5	-776.4	2,140.92	0.637	Collision RiskProcedures Req'd	
7,100.0	2,872.3	2,924.3	2,924.3	97.6	2,041.7	-90.12	-429.1	5,133.6	1,355.2	-786.2	2,141.42	0.633	Collision RiskProcedures Req'd	
7,125.0	2,872.2	2,924.2	2,924.2	98.1	2,041.6	-90.11	-429.1	5,133.6	1,346.4	-795.5	2,141.91	0.629	Collision RiskProcedures Req'd	

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.1	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - SOUTHERN UTE 005A - ST00 - ST00													Offset Site Error:	5.0 usft
Survey Program: 5719-3_Blind													Offset Well Error:	1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
7,150.0	2,872.1	2,924.1	2,924.1	98.7	2,041.5	-90.10	-429.1	5,133.6	1,337.9	-804.5	2,142.37	0.624	Collision RiskProcedures Req'd	
7,175.0	2,871.9	2,923.9	2,923.9	99.2	2,041.4	-90.10	-429.1	5,133.6	1,329.9	-813.0	2,142.81	0.621	Collision RiskProcedures Req'd	
7,200.0	2,871.8	2,923.8	2,923.8	99.8	2,041.3	-90.09	-429.1	5,133.6	1,322.2	-821.0	2,143.23	0.617	Collision RiskProcedures Req'd	
7,225.0	2,871.7	2,923.7	2,923.7	100.3	2,041.2	-90.09	-429.1	5,133.6	1,315.0	-828.6	2,143.62	0.613	Collision RiskProcedures Req'd	
7,250.0	2,871.5	2,923.5	2,923.5	100.9	2,041.1	-90.08	-429.1	5,133.6	1,308.3	-835.7	2,143.98	0.610	Collision RiskProcedures Req'd	
7,275.0	2,871.4	2,923.4	2,923.4	101.4	2,041.0	-90.08	-429.1	5,133.6	1,302.0	-842.3	2,144.32	0.607	Collision RiskProcedures Req'd	
7,300.0	2,871.3	2,923.3	2,923.3	102.0	2,040.9	-90.07	-429.1	5,133.6	1,296.1	-848.5	2,144.62	0.604	Collision RiskProcedures Req'd	
7,325.0	2,871.2	2,923.2	2,923.2	102.5	2,040.8	-90.06	-429.1	5,133.6	1,290.7	-854.2	2,144.90	0.602	Collision RiskProcedures Req'd	
7,350.0	2,871.0	2,923.0	2,923.0	103.1	2,040.8	-90.06	-429.1	5,133.6	1,285.8	-859.4	2,145.14	0.599	Collision RiskProcedures Req'd	
7,375.0	2,870.9	2,922.9	2,922.9	103.6	2,040.7	-90.05	-429.1	5,133.6	1,281.3	-864.0	2,145.34	0.597	Collision RiskProcedures Req'd	
7,400.0	2,870.8	2,922.8	2,922.8	104.2	2,040.6	-90.05	-429.1	5,133.6	1,277.3	-868.2	2,145.52	0.595	Collision RiskProcedures Req'd	
7,425.0	2,870.6	2,922.6	2,922.6	104.8	2,040.5	-90.04	-429.1	5,133.6	1,273.8	-871.9	2,145.65	0.594	Collision RiskProcedures Req'd	
7,450.0	2,870.5	2,922.5	2,922.5	105.3	2,040.4	-90.03	-429.1	5,133.6	1,270.8	-875.0	2,145.75	0.592	Collision RiskProcedures Req'd	
7,475.0	2,870.4	2,922.4	2,922.4	105.9	2,040.3	-90.03	-429.1	5,133.6	1,268.2	-877.6	2,145.82	0.591	Collision RiskProcedures Req'd	
7,500.0	2,870.2	2,922.2	2,922.2	106.4	2,040.2	-90.02	-429.1	5,133.6	1,266.2	-879.7	2,145.84	0.590	Collision RiskProcedures Req'd	
7,525.0	2,870.1	2,922.1	2,922.1	107.0	2,040.1	-90.02	-429.1	5,133.6	1,264.6	-881.2	2,145.82	0.589	Collision RiskProcedures Req'd	
7,545.8	2,870.0	2,922.0	2,922.0	107.4	2,040.0	-90.01	-429.1	5,133.6	1,263.7	-882.1	2,145.78	0.589	Collision RiskProcedures Req'd, CC, E	

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.1	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - Southern Ute 705H - Pilot Hole - WP2.1													Offset Site Error:	5.0 usft
Survey Program: 0-3_MWD+HRGM											Rule Assigned:		Offset Well Error:	
Measured Reference Depth (usft)	Vertical Reference Depth (usft)	Measured Offset Depth (usft)	Vertical Offset Depth (usft)	Semi Major Axis Reference Offset (usft)		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft) +E/-W (usft)		Distance Between Centres (usft) Between Ellipses (usft)		Minimum Separation (usft)	Separation Factor	Warning	
3,352.5	2,824.1	3,352.5	2,824.1	0.0	0.0	-97.29	-520.4	1,226.0	0.0	-2.3	2.28	0.005	Collision Risk	Procedures Req'd
3,375.0	2,833.5	3,375.0	2,833.6	0.3	0.5	-99.26	-528.4	1,244.7	1.1	-2.0	3.02	0.348	Collision Risk	Procedures Req'd
3,393.0	2,840.8	3,393.0	2,841.2	0.6	0.8	176.21	-534.7	1,259.8	0.5	-2.3	2.78	0.174	Collision Risk	Procedures Req'd
3,393.4	2,841.0	3,393.4	2,841.4	0.6	0.8	-176.40	-534.9	1,260.2	0.5	-2.3	2.81	0.177	Collision Risk	Procedures Req'd
3,400.0	2,843.6	3,399.9	2,844.2	0.6	1.0	-126.75	-537.2	1,265.6	1.2	-2.4	3.58	0.334	Collision Risk	Procedures Req'd
3,401.1	2,844.0	3,401.0	2,844.6	0.6	1.0	-124.21	-537.6	1,266.5	1.4	-2.3	3.64	0.372	Collision Risk	Procedures Req'd
3,425.0	2,852.9	3,424.6	2,854.6	0.8	1.5	-115.88	-545.9	1,286.2	5.0	0.7	4.31	1.165	Collision Risk	Procedures Req'd
3,426.1	2,853.3	3,425.7	2,855.1	0.8	1.5	-116.01	-546.3	1,287.1	5.2	0.9	4.34	1.201	Collision Risk	Procedures Req'd
3,450.0	2,861.2	3,449.2	2,865.0	1.0	1.9	-120.06	-554.7	1,306.7	9.4	4.5	4.84	1.934	Collision Risk	Procedures Req'd
3,451.1	2,861.5	3,450.3	2,865.5	1.0	2.0	-120.28	-555.1	1,307.6	9.6	4.7	4.86	1.968	Collision Risk	Procedures Req'd
3,475.0	2,868.5	3,473.7	2,875.3	1.2	2.4	-124.97	-563.3	1,327.1	14.3	9.0	5.30	2.696		
3,476.1	2,868.8	3,474.8	2,875.8	1.2	2.4	-125.19	-563.7	1,328.0	14.5	9.2	5.32	2.731		
3,500.0	2,874.7	3,498.0	2,885.6	1.4	2.9	-129.56	-571.9	1,347.4	19.9	14.3	5.69	3.503		
3,501.1	2,875.0	3,499.1	2,886.1	1.4	2.9	-129.75	-572.3	1,348.3	20.2	14.5	5.71	3.541		
3,525.0	2,880.0	3,522.1	2,895.8	1.6	3.4	-133.62	-580.5	1,367.5	26.4	20.3	6.04	4.370		
3,526.1	2,880.2	3,523.2	2,896.3	1.7	3.4	-133.78	-580.9	1,368.4	26.7	20.6	6.05	4.410		
3,550.0	2,884.2	3,545.9	2,905.9	1.9	3.8	-137.13	-588.9	1,387.4	33.7	27.3	6.33	5.320		
3,551.1	2,884.4	3,547.0	2,906.3	1.9	3.9	-137.28	-589.3	1,388.3	34.0	27.7	6.34	5.364		
3,575.0	2,887.4	3,569.5	2,915.8	2.1	4.3	-140.15	-597.2	1,407.0	41.8	35.2	6.58	6.351		
3,576.1	2,887.5	3,570.5	2,916.3	2.2	4.3	-140.27	-597.6	1,407.9	42.2	35.6	6.60	6.399		
3,600.0	2,889.5	3,592.7	2,925.6	2.4	4.8	-142.73	-605.4	1,426.3	50.9	44.1	6.80	7.475		
3,601.1	2,889.5	3,593.7	2,926.0	2.4	4.8	-142.84	-605.8	1,427.2	51.3	44.5	6.81	7.528		
3,625.0	2,890.5	3,615.4	2,935.2	2.7	5.2	-144.93	-613.5	1,445.4	60.8	53.8	7.00	8.684		
3,625.7	2,890.5	3,616.1	2,935.5	2.7	5.2	-144.99	-613.7	1,445.9	61.1	54.1	7.01	8.719		
3,640.6	2,890.6	3,629.4	2,941.1	2.9	5.5	-146.13	-618.5	1,457.0	67.5	60.3	7.11	9.483		
3,641.0	2,890.6	3,629.8	2,941.3	2.9	5.5	-146.18	-618.6	1,457.3	67.7	60.5	7.12	9.506		
3,650.0	2,890.6	3,637.8	2,944.7	3.0	5.7	-147.02	-621.5	1,464.0	71.6	64.4	7.18	9.969	CC, ES, SF	
3,651.1	2,890.6	3,638.8	2,945.1	3.0	5.7	-147.12	-621.8	1,464.9	72.1	64.9	7.19	10.027		
3,675.0	2,890.5	3,660.2	2,954.1	3.3	6.1	-148.94	-629.4	1,482.7	82.6	75.3	7.38	11.196		
3,676.1	2,890.5	3,661.2	2,954.6	3.3	6.1	-149.02	-629.7	1,483.5	83.1	75.8	7.39	11.249		
3,700.0	2,890.3	3,678.8	2,962.0	3.6	6.5	-150.19	-635.9	1,498.2	93.8	86.3	7.52	12.470		
3,701.1	2,890.3	3,678.8	2,962.0	3.6	6.5	-150.19	-635.9	1,498.2	94.4	86.8	7.51	12.561		
3,725.0	2,890.2	3,678.8	2,962.0	3.9	6.5	-150.19	-635.9	1,498.2	108.1	100.9	7.16	15.086		
3,726.1	2,890.2	3,678.8	2,962.0	3.9	6.5	-150.19	-635.9	1,498.2	108.8	101.6	7.14	15.231		
3,750.0	2,890.1	3,678.8	2,962.0	4.2	6.5	-150.19	-635.9	1,498.2	125.7	119.0	6.68	18.810		
3,775.0	2,889.9	3,678.8	2,962.0	4.5	6.5	-150.19	-635.9	1,498.2	145.5	139.4	6.17	23.599		
3,800.0	2,889.8	3,678.8	2,962.0	4.9	6.5	-150.19	-635.9	1,498.2	166.7	161.1	5.61	29.719		
3,825.0	2,889.7	3,678.8	2,962.0	5.2	6.5	-150.19	-635.9	1,498.2	188.9	184.1	4.74	39.864		
3,850.0	2,889.5	3,678.8	2,962.0	5.6	6.5	-150.19	-635.9	1,498.2	211.7	206.4	5.24	40.426		
3,875.0	2,889.4	3,678.8	2,962.0	5.9	6.5	-150.19	-635.9	1,498.2	234.9	229.5	5.40	43.513		
3,900.0	2,889.3	3,678.8	2,962.0	6.3	6.5	-150.19	-635.9	1,498.2	258.5	252.9	5.52	46.863		
3,925.0	2,889.1	3,678.8	2,962.0	6.6	6.5	-150.19	-635.9	1,498.2	282.3	276.6	5.62	50.251		
3,950.0	2,889.0	3,678.8	2,962.0	7.0	6.5	-150.19	-635.9	1,498.2	306.3	300.5	5.71	53.594		
3,975.0	2,888.9	3,678.8	2,962.0	7.4	6.5	-150.19	-635.9	1,498.2	330.4	324.6	5.81	56.857		
4,000.0	2,888.8	3,678.8	2,962.0	7.8	6.5	-150.19	-635.9	1,498.2	354.7	348.8	5.91	60.024		
4,025.0	2,888.6	3,678.8	2,962.0	8.2	6.5	-150.19	-635.9	1,498.2	379.0	373.0	6.01	63.087		
4,050.0	2,888.5	3,678.8	2,962.0	8.6	6.5	-150.19	-635.9	1,498.2	403.5	397.4	6.11	66.037		
4,075.0	2,888.4	3,678.8	2,962.0	9.0	6.5	-150.19	-635.9	1,498.2	428.0	421.8	6.21	68.876		
4,100.0	2,888.2	3,678.8	2,962.0	9.4	6.5	-150.19	-635.9	1,498.2	452.5	446.2	6.32	71.604		
4,125.0	2,888.1	3,678.8	2,962.0	9.8	6.5	-150.19	-635.9	1,498.2	477.1	470.7	6.43	74.236		
4,150.0	2,888.0	3,678.8	2,962.0	10.2	6.5	-150.19	-635.9	1,498.2	501.8	495.3	6.54	76.762		
4,175.0	2,887.8	3,678.8	2,962.0	10.6	6.5	-150.19	-635.9	1,498.2	526.5	519.8	6.65	79.187		

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.1	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - Southern Ute 705H - Pilot Hole - WP2.1													Offset Site Error:	5.0 usft
Survey Program: 0-3_MWD+HRGM													Offset Well Error:	1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis			Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Reference (usft)		Offset (usft)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)			
4,200.0	2,887.7	3,678.8	2,962.0	11.0	6.5	-150.19	-635.9	1,498.2	551.2	544.4	6.76	81.516		
4,225.0	2,887.6	3,678.8	2,962.0	11.5	6.5	-150.19	-635.9	1,498.2	575.9	569.0	6.87	83.770		
4,250.0	2,887.4	3,678.8	2,962.0	11.9	6.5	-150.19	-635.9	1,498.2	600.7	593.7	6.99	85.936		
4,275.0	2,887.3	3,678.8	2,962.0	12.3	6.5	-150.19	-635.9	1,498.2	625.4	618.3	7.11	88.018		
4,300.0	2,887.2	3,678.8	2,962.0	12.8	6.5	-150.19	-635.9	1,498.2	650.2	643.0	7.22	90.019		
4,325.0	2,887.0	3,678.8	2,962.0	13.2	6.5	-150.19	-635.9	1,498.2	675.0	667.7	7.34	91.968		
4,350.0	2,886.9	3,678.8	2,962.0	13.6	6.5	-150.19	-635.9	1,498.2	699.9	692.4	7.46	93.844		
4,375.0	2,886.8	3,678.8	2,962.0	14.1	6.5	-150.19	-635.9	1,498.2	724.7	717.1	7.58	95.652		
4,400.0	2,886.6	3,678.8	2,962.0	14.5	6.5	-150.19	-635.9	1,498.2	749.5	741.8	7.70	97.393		
4,425.0	2,886.5	3,678.8	2,962.0	15.0	6.5	-150.19	-635.9	1,498.2	774.4	766.6	7.81	99.100		
4,450.0	2,886.4	3,678.8	2,962.0	15.5	6.5	-150.19	-635.9	1,498.2	799.2	791.3	7.93	100.748		
4,475.0	2,886.2	3,678.8	2,962.0	15.9	6.5	-150.19	-635.9	1,498.2	824.1	816.1	8.05	102.339		
4,500.0	2,886.1	3,678.8	2,962.0	16.4	6.5	-150.19	-635.9	1,498.2	849.0	840.8	8.17	103.876		
4,525.0	2,886.0	3,678.8	2,962.0	16.9	6.5	-150.19	-635.9	1,498.2	873.9	865.6	8.29	105.393		
4,550.0	2,885.9	3,678.8	2,962.0	17.3	6.5	-150.19	-635.9	1,498.2	898.8	890.4	8.41	106.860		
4,575.0	2,885.7	3,678.8	2,962.0	17.8	6.5	-150.19	-635.9	1,498.2	923.7	915.1	8.53	108.281		
4,600.0	2,885.6	3,678.8	2,962.0	18.3	6.5	-150.19	-635.9	1,498.2	948.6	939.9	8.65	109.656		
4,625.0	2,885.5	3,678.8	2,962.0	18.7	6.5	-150.19	-635.9	1,498.2	973.5	964.7	8.77	111.022		
4,650.0	2,885.3	3,678.8	2,962.0	19.2	6.5	-150.19	-635.9	1,498.2	998.4	989.5	8.89	112.347		
4,675.0	2,885.2	3,678.8	2,962.0	19.7	6.5	-150.19	-635.9	1,498.2	1,023.3	1,014.3	9.01	113.633		
4,700.0	2,885.1	3,678.8	2,962.0	20.2	6.5	-150.19	-635.9	1,498.2	1,048.2	1,039.1	9.12	114.881		
4,725.0	2,884.9	3,678.8	2,962.0	20.7	6.5	-150.19	-635.9	1,498.2	1,073.2	1,063.9	9.24	116.126		
4,750.0	2,884.8	3,678.8	2,962.0	21.2	6.5	-150.19	-635.9	1,498.2	1,098.1	1,088.7	9.36	117.337		
4,775.0	2,884.7	3,678.8	2,962.0	21.7	6.5	-150.19	-635.9	1,498.2	1,123.0	1,113.5	9.48	118.515		
4,800.0	2,884.5	3,678.8	2,962.0	22.1	6.5	-150.19	-635.9	1,498.2	1,147.9	1,138.4	9.59	119.661		
4,825.0	2,884.4	3,678.8	2,962.0	22.6	6.5	-150.19	-635.9	1,498.2	1,172.9	1,163.2	9.71	120.810		
4,850.0	2,884.3	3,678.8	2,962.0	23.1	6.5	-150.19	-635.9	1,498.2	1,197.8	1,188.0	9.82	121.929		
4,875.0	2,884.1	3,678.8	2,962.0	23.6	6.5	-150.19	-635.9	1,498.2	1,222.8	1,212.8	9.94	123.021		
4,900.0	2,884.0	3,678.8	2,962.0	24.1	6.5	-150.19	-635.9	1,498.2	1,247.7	1,237.7	10.06	124.085		
4,925.0	2,883.9	3,678.8	2,962.0	24.6	6.5	-150.19	-635.9	1,498.2	1,272.7	1,262.5	10.17	125.156		
4,950.0	2,883.7	3,678.8	2,962.0	25.1	6.5	-150.19	-635.9	1,498.2	1,297.6	1,287.3	10.28	126.201		
4,975.0	2,883.6	3,678.8	2,962.0	25.6	6.5	-150.19	-635.9	1,498.2	1,322.6	1,312.2	10.40	127.222		
5,000.0	2,883.5	3,678.8	2,962.0	26.2	6.5	-150.19	-635.9	1,498.2	1,347.5	1,337.0	10.51	128.220		
5,025.0	2,883.4	3,678.8	2,962.0	26.7	6.5	-150.19	-635.9	1,498.2	1,372.5	1,361.8	10.62	129.227		
5,050.0	2,883.2	3,678.8	2,962.0	27.2	6.5	-150.19	-635.9	1,498.2	1,397.4	1,386.7	10.73	130.211		
5,075.0	2,883.1	3,678.8	2,962.0	27.7	6.5	-150.19	-635.9	1,498.2	1,422.4	1,411.5	10.84	131.176		
5,100.0	2,883.0	3,678.8	2,962.0	28.2	6.5	-150.19	-635.9	1,498.2	1,447.3	1,436.4	10.95	132.120		
5,117.3	2,882.9	3,678.8	2,962.0	28.5	6.5	-150.19	-635.9	1,498.2	1,464.6	1,453.6	11.03	132.775		
5,125.0	2,882.8	3,678.8	2,962.0	28.7	6.5	-146.20	-635.9	1,498.2	1,472.3	1,461.2	11.06	133.081		
5,150.0	2,882.7	3,678.8	2,962.0	29.2	6.5	-135.39	-635.9	1,498.2	1,497.2	1,486.1	11.17	134.094		
5,175.0	2,882.6	3,678.8	2,962.0	29.7	6.5	-127.38	-635.9	1,498.2	1,522.2	1,510.9	11.26	135.136		
5,200.0	2,882.4	3,678.8	2,962.0	30.3	6.5	-121.43	-635.9	1,498.2	1,547.1	1,535.7	11.36	136.211		
5,225.0	2,882.3	3,678.8	2,962.0	30.8	6.5	-116.92	-635.9	1,498.2	1,572.0	1,560.5	11.44	137.438		
5,250.0	2,882.2	3,678.8	2,962.0	31.3	6.5	-113.44	-635.9	1,498.2	1,596.8	1,585.3	11.51	138.713		
5,275.0	2,882.0	3,678.8	2,962.0	31.8	6.5	-110.68	-635.9	1,498.2	1,621.7	1,610.1	11.58	140.055		
5,300.0	2,881.9	3,678.8	2,962.0	32.3	6.5	-108.45	-635.9	1,498.2	1,646.5	1,634.8	11.64	141.498		
5,325.0	2,881.8	3,678.8	2,962.0	32.9	6.5	-106.63	-635.9	1,498.2	1,671.2	1,659.5	11.67	143.263		
5,350.0	2,881.6	3,678.8	2,962.0	33.4	6.5	-105.11	-635.9	1,498.2	1,695.9	1,684.2	11.65	145.597		
5,375.0	2,881.5	3,678.8	2,962.0	33.9	6.5	-103.82	-635.9	1,498.2	1,720.5	1,708.7	11.82	145.599		
5,400.0	2,881.3	3,678.8	2,962.0	34.5	6.5	-102.72	-635.9	1,498.2	1,745.1	1,733.1	12.00	145.417		
5,425.0	2,881.2	3,678.8	2,962.0	35.0	6.5	-101.77	-635.9	1,498.2	1,769.7	1,757.5	12.15	145.640		
5,450.0	2,881.1	3,678.8	2,962.0	35.5	6.5	-100.95	-635.9	1,498.2	1,794.1	1,781.9	12.29	145.970		

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.1	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - Southern Ute 705H - Pilot Hole - WP2.1													Offset Site Error:	5.0 usft
Survey Program: 0-3_MWD+HRGM											Rule Assigned:		Offset Well Error:	1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,475.0	2,880.9	3,678.8	2,962.0	36.0	6.5	-100.22	-635.9	1,498.2	1,818.6	1,806.1	12.43	146.360		
5,500.0	2,880.8	3,678.8	2,962.0	36.6	6.5	-99.58	-635.9	1,498.2	1,842.9	1,830.4	12.56	146.786		
5,525.0	2,880.7	3,678.8	2,962.0	37.1	6.5	-99.01	-635.9	1,498.2	1,867.2	1,854.5	12.67	147.393		
5,550.0	2,880.5	3,678.8	2,962.0	37.6	6.5	-98.50	-635.9	1,498.2	1,891.4	1,878.6	12.78	148.010		
5,575.0	2,880.4	3,678.8	2,962.0	38.2	6.5	-98.04	-635.9	1,498.2	1,915.5	1,902.6	12.89	148.634		
5,600.0	2,880.3	3,678.8	2,962.0	38.7	6.5	-97.62	-635.9	1,498.2	1,939.6	1,926.6	12.99	149.259		
5,625.0	2,880.1	3,678.8	2,962.0	39.2	6.5	-97.25	-635.9	1,498.2	1,963.5	1,950.5	13.09	150.057		
5,650.0	2,880.0	3,678.8	2,962.0	39.7	6.5	-96.90	-635.9	1,498.2	1,987.4	1,974.3	13.18	150.847		
5,675.0	2,879.8	3,678.8	2,962.0	40.3	6.5	-96.59	-635.9	1,498.2	2,011.2	1,998.0	13.26	151.630		
5,700.0	2,879.7	3,678.8	2,962.0	40.8	6.5	-96.30	-635.9	1,498.2	2,035.0	2,021.6	13.35	152.405		
5,725.0	2,879.6	3,678.8	2,962.0	41.3	6.5	-96.03	-635.9	1,498.2	2,058.6	2,045.2	13.42	153.360		
5,750.0	2,879.4	3,678.8	2,962.0	41.8	6.5	-95.79	-635.9	1,498.2	2,082.1	2,068.6	13.49	154.301		
5,775.0	2,879.3	3,678.8	2,962.0	42.4	6.5	-95.56	-635.9	1,498.2	2,105.6	2,092.0	13.56	155.227		
5,800.0	2,879.2	3,678.8	2,962.0	42.9	6.5	-95.35	-635.9	1,498.2	2,128.9	2,115.3	13.63	156.139		
5,825.0	2,879.0	3,678.8	2,962.0	43.4	6.5	-95.15	-635.9	1,498.2	2,152.1	2,138.5	13.69	157.246		
5,850.0	2,878.9	3,678.8	2,962.0	43.9	6.5	-94.97	-635.9	1,498.2	2,175.3	2,161.5	13.74	158.335		
5,875.0	2,878.8	3,678.8	2,962.0	44.4	6.5	-94.80	-635.9	1,498.2	2,198.3	2,184.5	13.79	159.403		
5,900.0	2,878.6	3,678.8	2,962.0	44.9	6.5	-94.64	-635.9	1,498.2	2,221.3	2,207.4	13.84	160.453		
5,925.0	2,878.5	3,678.8	2,962.0	45.4	6.5	-94.49	-635.9	1,498.2	2,244.1	2,230.2	13.88	161.718		
5,950.0	2,878.4	3,678.8	2,962.0	45.9	6.5	-94.35	-635.9	1,498.2	2,266.8	2,252.9	13.91	162.960		
5,975.0	2,878.2	3,678.8	2,962.0	46.4	6.5	-94.22	-635.9	1,498.2	2,289.4	2,275.5	13.94	164.179		
6,000.0	2,878.1	3,678.8	2,962.0	47.0	6.5	-94.10	-635.9	1,498.2	2,311.9	2,297.9	13.98	165.375		
6,025.0	2,878.0	3,678.8	2,962.0	47.5	6.5	-93.98	-635.9	1,498.2	2,334.3	2,320.3	14.00	166.717		
6,045.8	2,877.9	3,678.8	2,962.0	47.9	6.5	-93.89	-635.9	1,498.2	2,352.8	2,338.8	14.02	167.816		
6,050.0	2,877.8	3,678.8	2,962.0	47.9	6.5	-93.89	-635.9	1,498.2	2,356.5	2,342.5	14.02	168.055		
6,075.0	2,877.7	3,678.8	2,962.0	48.4	6.5	-93.89	-635.9	1,498.2	2,378.8	2,364.7	14.04	169.481		
6,100.0	2,877.6	3,678.8	2,962.0	48.9	6.5	-93.89	-635.9	1,498.2	2,401.1	2,387.0	14.05	170.895		
6,125.0	2,877.4	3,678.8	2,962.0	49.4	6.5	-93.89	-635.9	1,498.2	2,423.4	2,409.4	14.06	172.408		
6,150.0	2,877.3	3,678.8	2,962.0	49.9	6.5	-93.89	-635.9	1,498.2	2,445.9	2,431.8	14.06	173.909		
6,175.0	2,877.2	3,678.8	2,962.0	50.4	6.5	-93.89	-635.9	1,498.2	2,468.3	2,454.2	14.07	175.395		
6,200.0	2,877.0	3,678.8	2,962.0	51.0	6.5	-93.89	-635.9	1,498.2	2,490.8	2,476.7	14.08	176.868		
6,225.0	2,876.9	3,678.8	2,962.0	51.5	6.5	-93.89	-635.9	1,498.2	2,513.4	2,499.3	14.08	178.450		
6,250.0	2,876.8	3,678.8	2,962.0	52.0	6.5	-93.89	-635.9	1,498.2	2,536.0	2,521.9	14.09	180.018		
6,275.0	2,876.7	3,678.8	2,962.0	52.5	6.5	-93.89	-635.9	1,498.2	2,558.6	2,544.5	14.09	181.571		
6,300.0	2,876.5	3,678.8	2,962.0	53.0	6.5	-93.89	-635.9	1,498.2	2,581.3	2,567.2	14.10	183.108		
6,325.0	2,876.4	3,678.8	2,962.0	53.5	6.5	-93.89	-635.9	1,498.2	2,604.1	2,590.0	14.10	184.750		
6,350.0	2,876.3	3,678.8	2,962.0	54.0	6.5	-93.89	-635.9	1,498.2	2,626.8	2,612.7	14.09	186.377		
6,375.0	2,876.1	3,678.8	2,962.0	54.5	6.5	-93.89	-635.9	1,498.2	2,649.6	2,635.6	14.09	187.987		
6,400.0	2,876.0	3,678.8	2,962.0	55.1	6.5	-93.89	-635.9	1,498.2	2,672.5	2,658.4	14.10	189.581		
6,425.0	2,875.9	3,678.8	2,962.0	55.6	6.5	-93.89	-635.9	1,498.2	2,695.4	2,681.3	14.09	191.276		
6,450.0	2,875.7	3,678.8	2,962.0	56.1	6.5	-93.89	-635.9	1,498.2	2,718.3	2,704.2	14.09	192.955		
6,475.0	2,875.6	3,678.8	2,962.0	56.6	6.5	-93.89	-635.9	1,498.2	2,741.3	2,727.2	14.09	194.617		
6,500.0	2,875.5	3,678.8	2,962.0	57.1	6.5	-93.89	-635.9	1,498.2	2,764.3	2,750.2	14.08	196.262		
6,525.0	2,875.3	3,678.8	2,962.0	57.7	6.5	-93.89	-635.9	1,498.2	2,787.3	2,773.2	14.08	198.005		
6,550.0	2,875.2	3,678.8	2,962.0	58.2	6.5	-93.89	-635.9	1,498.2	2,810.4	2,796.3	14.07	199.731		
6,575.0	2,875.1	3,678.8	2,962.0	58.7	6.5	-93.89	-635.9	1,498.2	2,833.5	2,819.4	14.07	201.441		
6,600.0	2,875.0	3,678.8	2,962.0	59.2	6.5	-93.89	-635.9	1,498.2	2,856.6	2,842.6	14.06	203.134		
6,625.0	2,874.8	3,678.8	2,962.0	59.8	6.5	-93.89	-635.9	1,498.2	2,879.8	2,865.7	14.05	204.921		
6,650.0	2,874.7	3,678.8	2,962.0	60.3	6.5	-93.89	-635.9	1,498.2	2,903.0	2,888.9	14.04	206.692		
6,675.0	2,874.6	3,678.8	2,962.0	60.8	6.5	-93.89	-635.9	1,498.2	2,926.2	2,912.2	14.04	208.446		
6,700.0	2,874.4	3,678.8	2,962.0	61.4	6.5	-93.89	-635.9	1,498.2	2,949.5	2,935.4	14.03	210.182		
6,725.0	2,874.3	3,678.8	2,962.0	61.9	6.5	-93.89	-635.9	1,498.2	2,972.7	2,958.7	14.02	212.012		

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.1	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - Southern Ute 705H - Pilot Hole - WP2.1													Offset Site Error:	5.0 usft
Survey Program: 0-3_MWD+HRGM													Offset Well Error:	1.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
6,750.0	2,874.2	3,678.8	2,962.0	62.4	6.5	-93.89	-635.9	1,498.2	2,996.0	2,982.0	14.01	213.824		
6,775.0	2,874.0	3,678.8	2,962.0	63.0	6.5	-93.89	-635.9	1,498.2	3,019.4	3,005.4	14.00	215.621		
6,800.0	2,873.9	3,678.8	2,962.0	63.5	6.5	-93.89	-635.9	1,498.2	3,042.7	3,028.8	14.00	217.400		
6,825.0	2,873.8	3,678.8	2,962.0	64.1	6.5	-93.89	-635.9	1,498.2	3,066.1	3,052.2	13.98	219.269		
6,850.0	2,873.6	3,678.8	2,962.0	64.6	6.5	-93.89	-635.9	1,498.2	3,089.6	3,075.6	13.97	221.123		
6,875.0	2,873.5	3,678.8	2,962.0	65.1	6.5	-93.89	-635.9	1,498.2	3,113.0	3,099.0	13.96	222.960		
6,900.0	2,873.4	3,678.8	2,962.0	65.7	6.5	-93.89	-635.9	1,498.2	3,136.5	3,122.5	13.95	224.780		
6,925.0	2,873.3	3,678.8	2,962.0	66.2	6.5	-93.89	-635.9	1,498.2	3,159.9	3,146.0	13.94	226.689		
6,950.0	2,873.1	3,678.8	2,962.0	66.8	6.5	-93.89	-635.9	1,498.2	3,183.4	3,169.5	13.93	228.583		
6,975.0	2,873.0	3,678.8	2,962.0	67.3	6.5	-93.89	-635.9	1,498.2	3,207.0	3,193.1	13.92	230.460		
7,000.0	2,872.9	3,678.8	2,962.0	67.9	6.5	-93.89	-635.9	1,498.2	3,230.5	3,216.6	13.91	232.321		
7,025.0	2,872.7	3,678.8	2,962.0	68.4	6.5	-93.89	-635.9	1,498.2	3,254.1	3,240.2	13.89	234.269		
7,050.0	2,872.6	3,678.8	2,962.0	69.0	6.5	-93.89	-635.9	1,498.2	3,277.7	3,263.8	13.88	236.203		
7,075.0	2,872.5	3,678.8	2,962.0	69.5	6.5	-93.89	-635.9	1,498.2	3,301.3	3,287.5	13.86	238.120		
7,100.0	2,872.3	3,678.8	2,962.0	70.1	6.5	-93.89	-635.9	1,498.2	3,325.0	3,311.1	13.85	240.022		
7,125.0	2,872.2	3,678.8	2,962.0	70.6	6.5	-93.89	-635.9	1,498.2	3,348.6	3,334.8	13.84	242.011		
7,150.0	2,872.1	3,678.8	2,962.0	71.2	6.5	-93.89	-635.9	1,498.2	3,372.3	3,358.5	13.82	243.985		
7,175.0	2,871.9	3,678.8	2,962.0	71.7	6.5	-93.89	-635.9	1,498.2	3,396.0	3,382.2	13.81	245.943		
7,200.0	2,871.8	3,678.8	2,962.0	72.3	6.5	-93.89	-635.9	1,498.2	3,419.7	3,405.9	13.80	247.887		
7,225.0	2,871.7	3,678.8	2,962.0	72.8	6.5	-93.89	-635.9	1,498.2	3,443.4	3,429.7	13.78	249.917		
7,250.0	2,871.5	3,678.8	2,962.0	73.4	6.5	-93.89	-635.9	1,498.2	3,467.2	3,453.4	13.76	251.933		
7,275.0	2,871.4	3,678.8	2,962.0	73.9	6.5	-93.89	-635.9	1,498.2	3,491.0	3,477.2	13.75	253.935		
7,300.0	2,871.3	3,678.8	2,962.0	74.5	6.5	-93.89	-635.9	1,498.2	3,514.7	3,501.0	13.73	255.922		
7,325.0	2,871.2	3,678.8	2,962.0	75.1	6.5	-93.89	-635.9	1,498.2	3,538.5	3,524.8	13.72	257.996		
7,350.0	2,871.0	3,678.8	2,962.0	75.6	6.5	-93.89	-635.9	1,498.2	3,562.4	3,548.7	13.70	260.056		
7,375.0	2,870.9	3,678.8	2,962.0	76.2	6.5	-93.89	-635.9	1,498.2	3,586.2	3,572.5	13.68	262.104		
7,400.0	2,870.8	3,678.8	2,962.0	76.7	6.5	-93.89	-635.9	1,498.2	3,610.0	3,596.4	13.67	264.138		
7,425.0	2,870.6	3,678.8	2,962.0	77.3	6.5	-93.89	-635.9	1,498.2	3,633.9	3,620.3	13.65	266.259		
7,450.0	2,870.5	3,678.8	2,962.0	77.8	6.5	-93.89	-635.9	1,498.2	3,657.8	3,644.2	13.63	268.368		
7,475.0	2,870.4	3,678.8	2,962.0	78.4	6.5	-93.89	-635.9	1,498.2	3,681.7	3,668.1	13.61	270.465		
7,500.0	2,870.2	3,678.8	2,962.0	79.0	6.5	-93.89	-635.9	1,498.2	3,705.6	3,692.0	13.60	272.551		
7,525.0	2,870.1	3,678.8	2,962.0	79.5	6.5	-93.89	-635.9	1,498.2	3,729.5	3,715.9	13.58	274.695		
7,545.8	2,870.0	3,678.8	2,962.0	80.0	6.5	-93.89	-635.9	1,498.2	3,749.5	3,735.9	13.56	276.474		

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

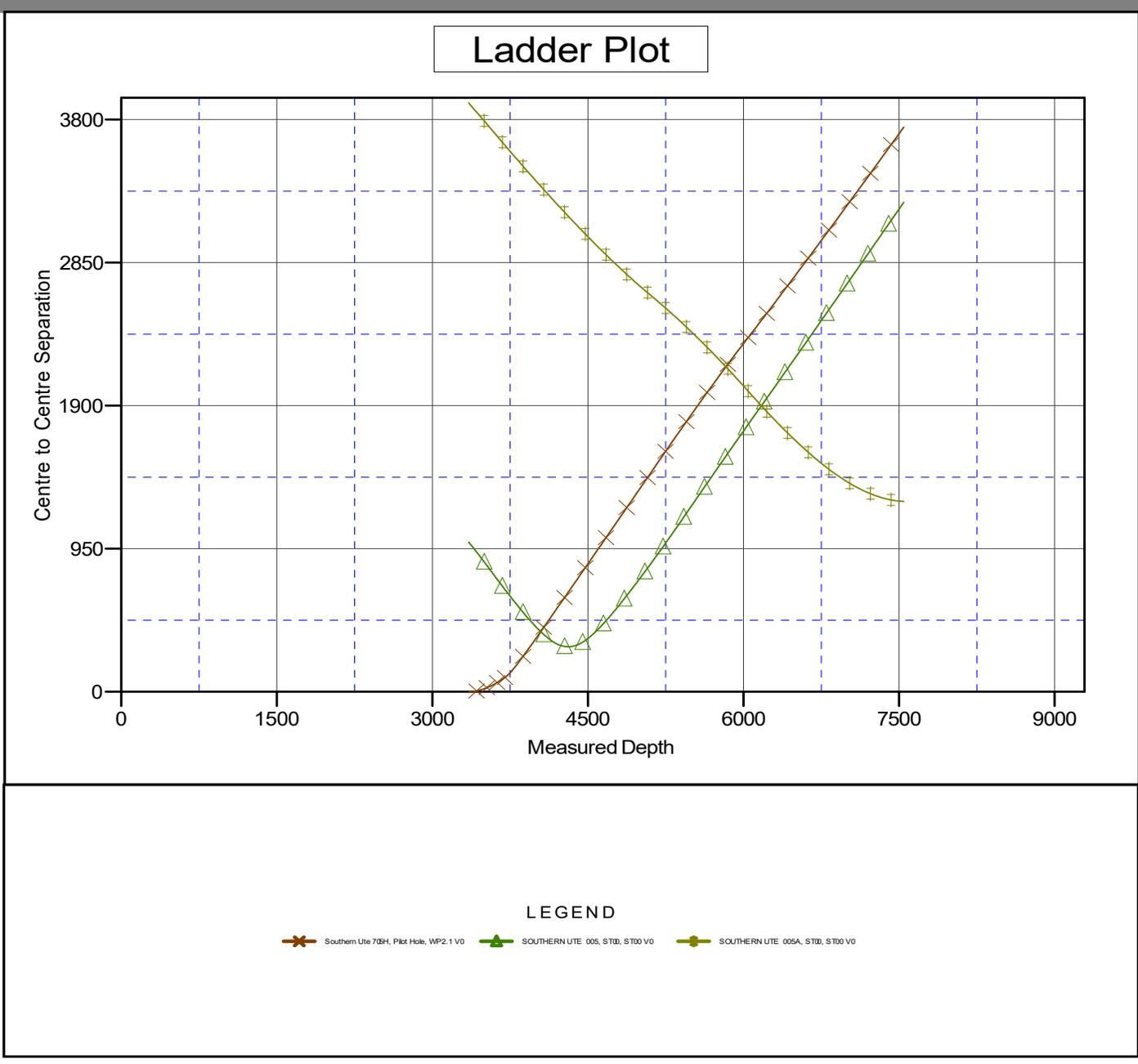
Halliburton

Anticollision Report

Company: Hilcorp Energy Company	Local Co-ordinate Reference: Well Southern Ute 705H	
Project: Farmington, NM	TVD Reference: RKB to MSL= 6310 @ 6310.0usft	
Reference Site: San Juan Basin	MD Reference: RKB to MSL= 6310 @ 6310.0usft	
Site Error: 5.0 usft	North Reference: Grid	
Reference Well: Southern Ute 705H	Survey Calculation Method: Minimum Curvature	
Well Error: 1.0 usft	Output errors are at 2.00 sigma	
Reference Wellbore Lateral No.1	Database: EDM 5000.1 Single User Db	
Reference Design: WP2.1	Offset TVD Reference: Offset Datum	

Reference Depths are relative to RKB to MSL= 6310 @ 6310.0usft
 Offset Depths are relative to Offset Datum
 Central Meridian is 107° 50' 0.000 W

Coordinates are relative to: Southern Ute 705H
 Coordinate System is US State Plane 1927 (Exact solution), New Mexico West 30
 Grid Convergence at Surface is: 0.15°



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

Halliburton

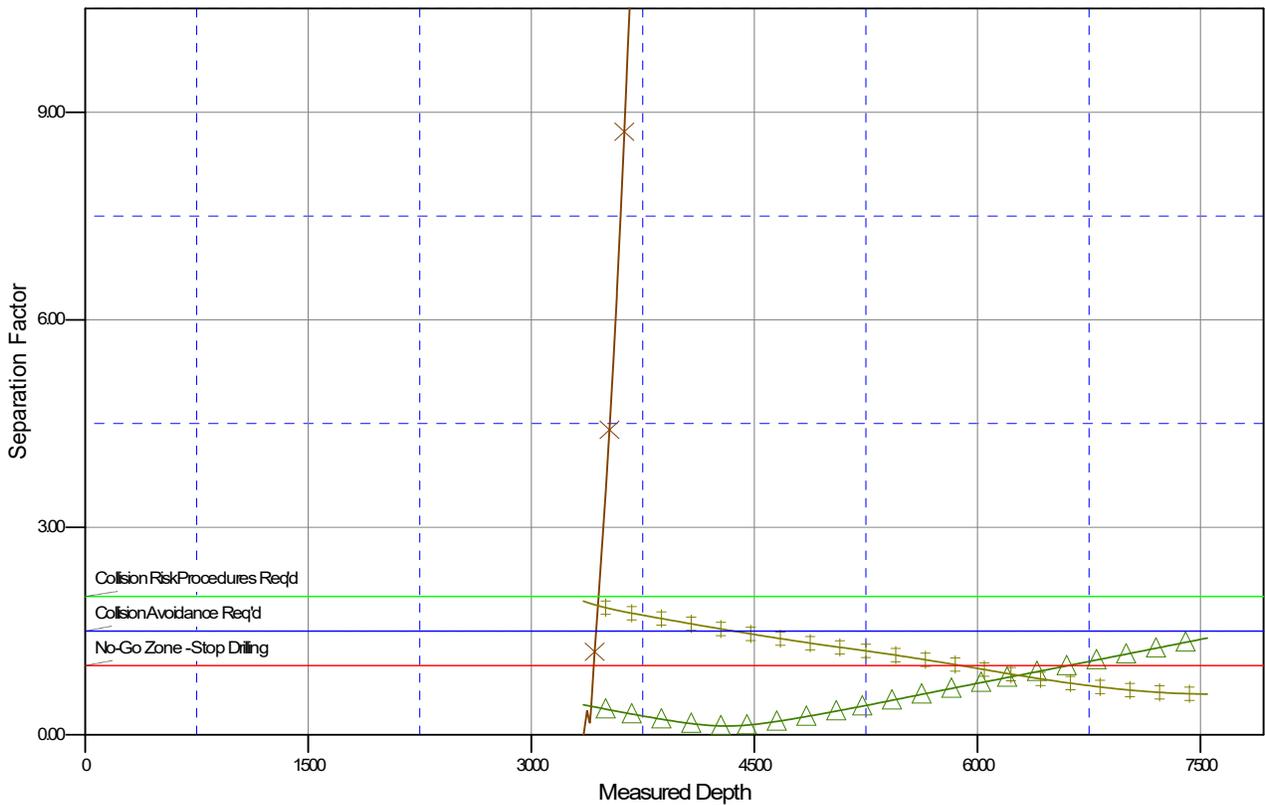
Anticollision Report

Company: Hilcorp Energy Company	Local Co-ordinate Reference: Well Southern Ute 705H	
Project: Farmington, NM	TVD Reference: RKB to MSL= 6310 @ 6310.0usft	
Reference Site: San Juan Basin	MD Reference: RKB to MSL= 6310 @ 6310.0usft	
Site Error: 5.0 usft	North Reference: Grid	
Reference Well: Southern Ute 705H	Survey Calculation Method: Minimum Curvature	
Well Error: 1.0 usft	Output errors are at 2.00 sigma	
Reference Wellbore Lateral No.1	Database: EDM 5000.1 Single User Db	
Reference Design: WP2.1	Offset TVD Reference: Offset Datum	

Reference Depths are relative to RKB to MSL= 6310 @ 6310.0usft
 Offset Depths are relative to Offset Datum
 Central Meridian is 107° 50' 0.000 W

Coordinates are relative to: Southern Ute 705H
 Coordinate System is US State Plane 1927 (Exact solution), New Mexico West 30
 Grid Convergence at Surface is: 0.15°

Separation Factor Plot



LEGEND

- ✕ Southern Ute 705H, Pilot Hole, WP2.1 V0
- ▲ SOUTHERN UTE 005A, STD, STD0 V0
- SOUTHERN UTE 005A, STD, STD0 V0



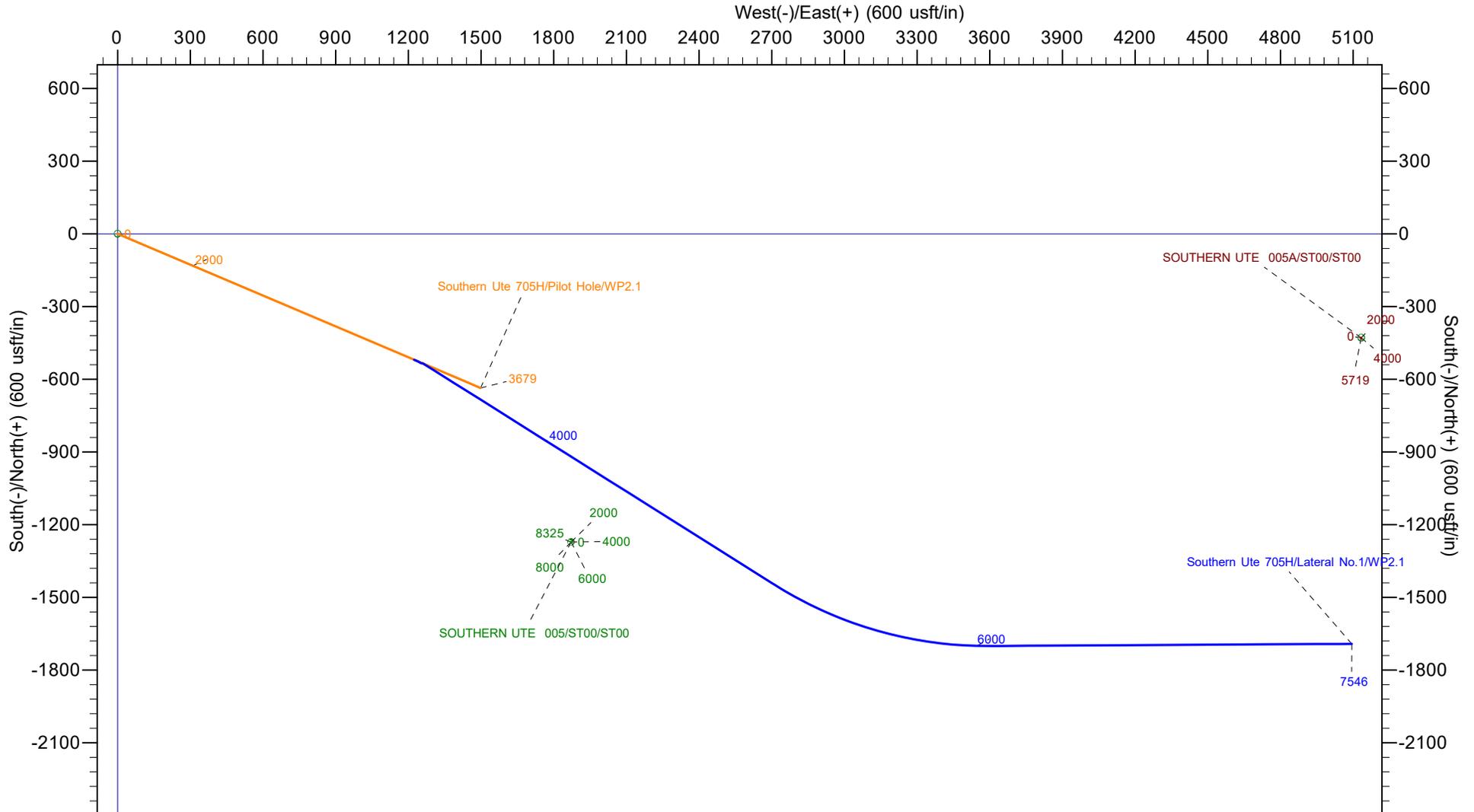
Project: Farmington, NM
Site: San Juan Basin
Well: Southern Ute 705H
Wellbore: Lateral No.1
Design: WP2.1



Reference is Grid North

PROJECT DETAILS: Farmington, NM
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

11:25, March 15 2023



Hilcorp Energy Company

**Farmington, NM
San Juan Basin
Southern Ute 705H**

Lateral No.2

Plan: WP2.1

Standard Planning Report

17 February, 2023

Halliburton

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Southern Ute 705H
Company:	Hilcorp Energy Company	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Project:	Farmington, NM	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site:	San Juan Basin	North Reference:	Grid
Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral No.2		
Design:	WP2.1		

Project Farmington, NM			
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		Using geodetic scale factor

Site San Juan Basin			
Site Position:		Northing:	2,186,723.60 usft
From:	Map	Easting:	570,736.10 usft
Position Uncertainty:	5.0 usft	Slot Radius:	13.200 in
		Latitude:	37.009
		Longitude:	-107.591

Well Southern Ute 705H			
Well Position	+N/-S	0.0 usft	Northing: 2,192,025.35 usft
	+E/-W	0.0 usft	Easting: 571,642.18 usft
Position Uncertainty		1.0 usft	Wellhead Elevation: usft
Grid Convergence:		0.15 °	Ground Level: 6,295.0 usft
			Latitude: 37.024
			Longitude: -107.588

Wellbore Lateral No.2					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2022	2/8/2023	8.68	63.42	49,552.26589503

Design WP2.1				
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	3,300.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	96.38

Plan Survey Tool Program		Date 2/17/2023
Depth From (usft)	Depth To (usft)	Survey (Wellbore)
1	3,300.0	7,213.3 WP2.1 (Lateral No.2)
		Tool Name 3_MWD+HRGM
		Remarks B001Mb: HRGM declination co

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
3,300.0	63.93	113.00	2,801.6	-501.9	1,182.4	0.00	0.00	0.00	0.00	
3,344.0	65.25	90.00	2,820.5	-517.4	1,218.9	3.00	3.00	0.00	0.00	
3,683.0	90.66	90.78	2,890.6	-519.8	1,547.8	7.50	7.50	0.23	1.83	
7,214.0	90.66	90.78	2,850.0	-568.1	5,078.2	0.00	0.00	0.00	0.00	TD (705H Lat.No.2)

Halliburton

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Southern Ute 705H
Company:	Hilcorp Energy Company	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Project:	Farmington, NM	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site:	San Juan Basin	North Reference:	Grid
Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral No.2		
Design:	WP2.1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
743.0	0.00	0.00	743.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	1.43	113.00	800.0	-0.3	0.7	0.7	2.50	2.50	0.00
900.0	3.93	113.00	899.9	-2.1	4.9	5.2	2.50	2.50	0.00
1,000.0	6.43	113.00	999.5	-5.6	13.3	13.8	2.50	2.50	0.00
1,100.0	8.93	113.00	1,098.6	-10.8	25.5	26.6	2.50	2.50	0.00
1,200.0	11.43	113.00	1,197.0	-17.7	41.8	43.5	2.50	2.50	0.00
1,300.0	13.93	113.00	1,294.5	-26.3	62.0	64.5	2.50	2.50	0.00
1,400.0	16.43	113.00	1,391.0	-36.5	86.1	89.6	2.50	2.50	0.00
1,500.0	18.93	113.00	1,486.3	-48.4	114.0	118.7	2.50	2.50	0.00
1,600.0	21.43	113.00	1,580.2	-61.9	145.8	151.8	2.50	2.50	0.00
1,700.0	23.93	113.00	1,672.4	-76.9	181.3	188.7	2.50	2.50	0.00
1,800.0	26.43	113.00	1,762.9	-93.6	220.4	229.5	2.50	2.50	0.00
1,900.0	28.93	113.00	1,851.5	-111.7	263.2	274.0	2.50	2.50	0.00
2,000.0	31.43	113.00	1,937.9	-131.3	309.4	322.1	2.50	2.50	0.00
2,100.0	33.93	113.00	2,022.1	-152.4	359.1	373.8	2.50	2.50	0.00
2,200.0	36.43	113.00	2,103.8	-174.9	412.2	429.0	2.50	2.50	0.00
2,300.0	38.93	113.00	2,183.0	-198.8	468.4	487.6	2.50	2.50	0.00
2,400.0	41.43	113.00	2,259.4	-224.0	527.8	549.4	2.50	2.50	0.00
2,500.0	43.93	113.00	2,332.9	-250.5	590.2	614.4	2.50	2.50	0.00
2,600.0	46.43	113.00	2,403.4	-278.2	655.5	682.3	2.50	2.50	0.00
2,700.0	48.93	113.00	2,470.7	-307.1	723.5	753.2	2.50	2.50	0.00
2,800.0	51.43	113.00	2,534.7	-337.1	794.2	826.8	2.50	2.50	0.00
2,900.0	53.93	113.00	2,595.4	-368.2	867.4	902.9	2.50	2.50	0.00
3,000.0	56.43	113.00	2,652.5	-400.3	943.0	981.6	2.50	2.50	0.00
3,100.0	58.93	113.00	2,705.9	-433.3	1,020.7	1,062.6	2.50	2.50	0.00
3,200.0	61.43	113.00	2,755.7	-467.2	1,100.6	1,145.7	2.50	2.50	0.00
3,300.0	63.93	113.00	2,801.6	-501.9	1,182.4	1,230.8	2.50	2.50	0.00
3,344.0	65.25	90.00	2,820.5	-517.4	1,218.9	1,268.9	47.25	3.00	-52.27
3,350.0	65.69	90.02	2,822.9	-517.4	1,224.4	1,274.3	7.50	7.50	0.26
3,400.0	69.44	90.14	2,842.0	-517.5	1,270.6	1,320.3	7.50	7.50	0.25
3,450.0	73.19	90.26	2,858.0	-517.6	1,318.0	1,367.3	7.50	7.50	0.24
3,500.0	76.94	90.38	2,870.9	-517.9	1,366.3	1,415.4	7.50	7.50	0.23
3,550.0	80.69	90.49	2,880.6	-518.3	1,415.3	1,464.1	7.50	7.50	0.23
3,600.0	84.44	90.60	2,887.1	-518.8	1,464.9	1,513.5	7.50	7.50	0.22
3,650.0	88.18	90.71	2,890.3	-519.3	1,514.8	1,563.1	7.50	7.50	0.22
3,683.0	90.66	90.78	2,890.6	-519.8	1,547.8	1,595.9	7.50	7.50	0.22
3,700.0	90.66	90.78	2,890.4	-520.0	1,564.7	1,612.9	0.00	0.00	0.00
3,800.0	90.66	90.78	2,889.3	-521.4	1,664.7	1,712.4	0.00	0.00	0.00
3,900.0	90.66	90.78	2,888.1	-522.7	1,764.7	1,811.9	0.00	0.00	0.00
4,000.0	90.66	90.78	2,887.0	-524.1	1,864.7	1,911.4	0.00	0.00	0.00
4,100.0	90.66	90.78	2,885.8	-525.5	1,964.7	2,010.9	0.00	0.00	0.00
4,200.0	90.66	90.78	2,884.7	-526.8	2,064.7	2,110.4	0.00	0.00	0.00
4,300.0	90.66	90.78	2,883.5	-528.2	2,164.6	2,210.0	0.00	0.00	0.00
4,400.0	90.66	90.78	2,882.4	-529.6	2,264.6	2,309.5	0.00	0.00	0.00
4,500.0	90.66	90.78	2,881.2	-530.9	2,364.6	2,409.0	0.00	0.00	0.00
4,600.0	90.66	90.78	2,880.1	-532.3	2,464.6	2,508.5	0.00	0.00	0.00

Halliburton

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Southern Ute 705H
Company:	Hilcorp Energy Company	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Project:	Farmington, NM	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site:	San Juan Basin	North Reference:	Grid
Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral No.2		
Design:	WP2.1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
4,700.0	90.66	90.78	2,878.9	-533.7	2,564.6	2,608.0	0.00	0.00	0.00	
4,800.0	90.66	90.78	2,877.8	-535.1	2,664.6	2,707.5	0.00	0.00	0.00	
4,900.0	90.66	90.78	2,876.6	-536.4	2,764.6	2,807.1	0.00	0.00	0.00	
5,000.0	90.66	90.78	2,875.5	-537.8	2,864.5	2,906.6	0.00	0.00	0.00	
5,100.0	90.66	90.78	2,874.3	-539.2	2,964.5	3,006.1	0.00	0.00	0.00	
5,200.0	90.66	90.78	2,873.2	-540.5	3,064.5	3,105.6	0.00	0.00	0.00	
5,300.0	90.66	90.78	2,872.0	-541.9	3,164.5	3,205.1	0.00	0.00	0.00	
5,400.0	90.66	90.78	2,870.9	-543.3	3,264.5	3,304.6	0.00	0.00	0.00	
5,500.0	90.66	90.78	2,869.7	-544.6	3,364.5	3,404.1	0.00	0.00	0.00	
5,600.0	90.66	90.78	2,868.6	-546.0	3,464.4	3,503.7	0.00	0.00	0.00	
5,700.0	90.66	90.78	2,867.4	-547.4	3,564.4	3,603.2	0.00	0.00	0.00	
5,800.0	90.66	90.78	2,866.3	-548.7	3,664.4	3,702.7	0.00	0.00	0.00	
5,900.0	90.66	90.78	2,865.1	-550.1	3,764.4	3,802.2	0.00	0.00	0.00	
6,000.0	90.66	90.78	2,864.0	-551.5	3,864.4	3,901.7	0.00	0.00	0.00	
6,100.0	90.66	90.78	2,862.8	-552.8	3,964.4	4,001.2	0.00	0.00	0.00	
6,200.0	90.66	90.78	2,861.7	-554.2	4,064.3	4,100.8	0.00	0.00	0.00	
6,300.0	90.66	90.78	2,860.5	-555.6	4,164.3	4,200.3	0.00	0.00	0.00	
6,400.0	90.66	90.78	2,859.4	-557.0	4,264.3	4,299.8	0.00	0.00	0.00	
6,500.0	90.66	90.78	2,858.2	-558.3	4,364.3	4,399.3	0.00	0.00	0.00	
6,600.0	90.66	90.78	2,857.1	-559.7	4,464.3	4,498.8	0.00	0.00	0.00	
6,700.0	90.66	90.78	2,855.9	-561.1	4,564.3	4,598.3	0.00	0.00	0.00	
6,800.0	90.66	90.78	2,854.8	-562.4	4,664.2	4,697.9	0.00	0.00	0.00	
6,900.0	90.66	90.78	2,853.6	-563.8	4,764.2	4,797.4	0.00	0.00	0.00	
7,000.0	90.66	90.78	2,852.5	-565.2	4,864.2	4,896.9	0.00	0.00	0.00	
7,100.0	90.66	90.78	2,851.3	-566.5	4,964.2	4,996.4	0.00	0.00	0.00	
7,200.0	90.66	90.78	2,850.2	-567.9	5,064.2	5,095.9	0.00	0.00	0.00	
7,214.0	90.66	90.78	2,850.0	-568.1	5,078.2	5,109.9	0.00	0.00	0.00	

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
TD (705H Lat.No.2) - hit/miss target - Shape - Point	0.00	0.00	2,850.0	-568.1	5,078.2	2,191,457.30	576,720.00	37.022	-107.571

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
3,300.0	2,801.6	-501.9	1,182.4	Tie On @ 3300' MD	
3,344.0	2,820.5	-517.4	1,218.9	BOW @ 3344' MD	
3,683.0	2,890.6	-519.8	1,547.8	EOB & SOH @ 3683' MD, 90.66° INC	
7,214.0	2,850.0	-568.1	5,078.2	PBHL @ 7214' MD	



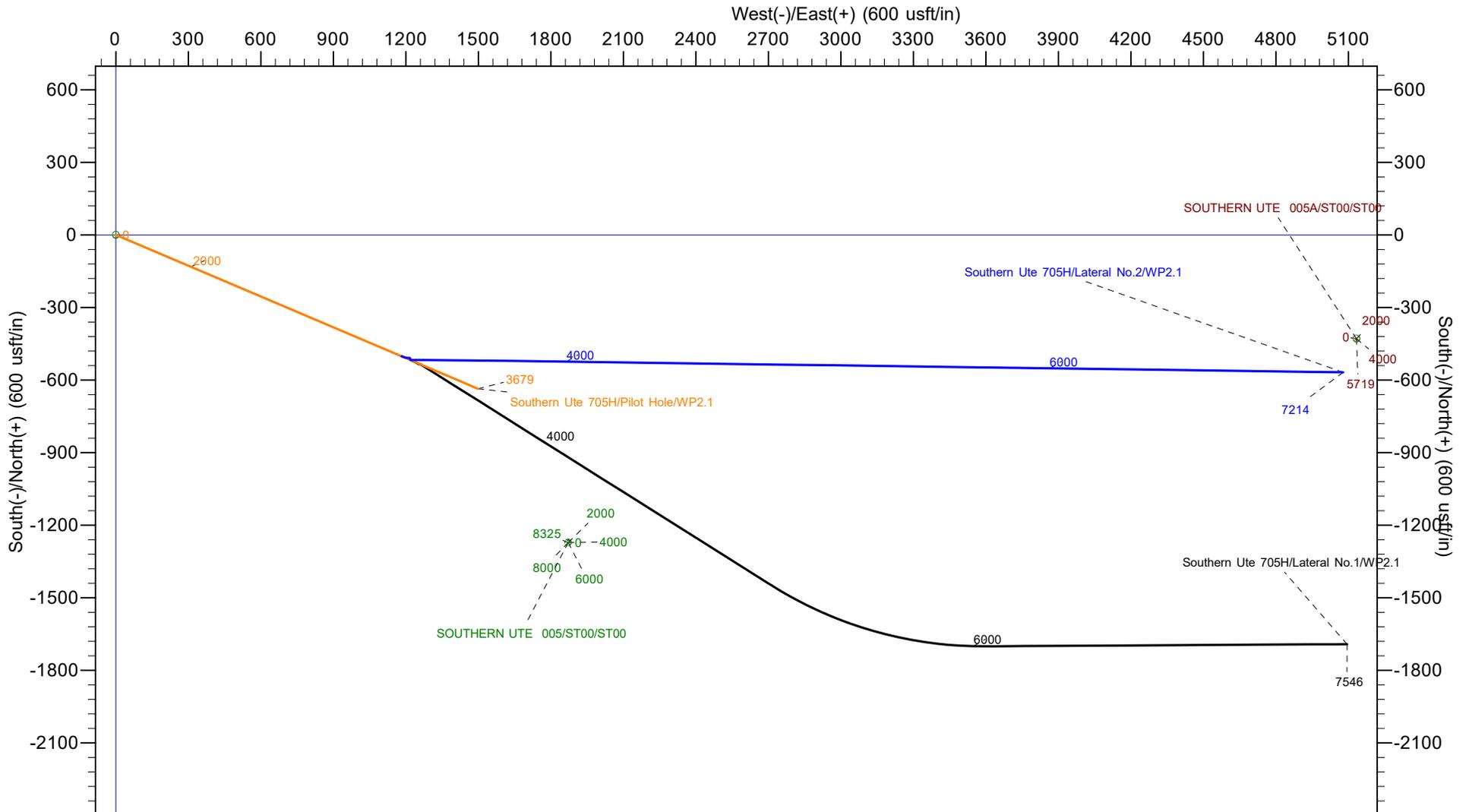
Project: Farmington, NM
Site: San Juan Basin
Well: Southern Ute 705H
Wellbore: Lateral No.2
Design: WP2.1



Reference is Grid North

PROJECT DETAILS: Farmington, NM
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

11:27, March 15 2023



Hilcorp Energy Company

**Farmington, NM
San Juan Basin
Southern Ute 705H**

Lateral No.2

Plan: WP2.1

Standard Planning Report - Geographic

17 February, 2023

Halliburton

Planning Report - Geographic

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Southern Ute 705H
Company:	Hilcorp Energy Company	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Project:	Farmington, NM	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site:	San Juan Basin	North Reference:	Grid
Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral No.2		
Design:	WP2.1		

Project Farmington, NM			
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		Using geodetic scale factor

Site San Juan Basin			
Site Position:		Northing:	2,186,723.60 usft
From:	Map	Easting:	570,736.10 usft
Position Uncertainty:	5.0 usft	Slot Radius:	13.200 in
		Latitude:	37.009
		Longitude:	-107.591

Well Southern Ute 705H			
Well Position	+N/-S	0.0 usft	Northing: 2,192,025.35 usft
	+E/-W	0.0 usft	Easting: 571,642.18 usft
Position Uncertainty		1.0 usft	Wellhead Elevation: usft
Grid Convergence:		0.15 °	Latitude: 37.024
			Longitude: -107.588
			Ground Level: 6,295.0 usft

Wellbore Lateral No.2					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2022	2/8/2023	8.68	63.42	49,552.26589503

Design WP2.1				
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	3,300.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	96.38

Plan Survey Tool Program		Date 2/17/2023
Depth From (usft)	Depth To (usft)	Survey (Wellbore)
1	3,300.0	7,213.3 WP2.1 (Lateral No.2)
Tool Name	Remarks	
3_MWD+HRGM	B001Mb: HRGM declination cc	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
3,300.0	63.93	113.00	2,801.6	-501.9	1,182.4	0.00	0.00	0.00	0.00	
3,344.0	65.25	90.00	2,820.5	-517.4	1,218.9	3.00	3.00	0.00	0.00	
3,683.0	90.66	90.78	2,890.6	-519.8	1,547.8	7.50	7.50	0.23	1.83	
7,214.0	90.66	90.78	2,850.0	-568.1	5,078.2	0.00	0.00	0.00	0.00	TD (705H Lat.No.2)

Halliburton

Planning Report - Geographic

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Southern Ute 705H
Company:	Hilcorp Energy Company	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Project:	Farmington, NM	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site:	San Juan Basin	North Reference:	Grid
Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral No.2		
Design:	WP2.1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.0	0.00	0.00	0.0	0.0	0.0	2,192,025.35	571,642.18	37.024	-107.588	
100.0	0.00	0.00	100.0	0.0	0.0	2,192,025.35	571,642.18	37.024	-107.588	
200.0	0.00	0.00	200.0	0.0	0.0	2,192,025.35	571,642.18	37.024	-107.588	
300.0	0.00	0.00	300.0	0.0	0.0	2,192,025.35	571,642.18	37.024	-107.588	
400.0	0.00	0.00	400.0	0.0	0.0	2,192,025.35	571,642.18	37.024	-107.588	
500.0	0.00	0.00	500.0	0.0	0.0	2,192,025.35	571,642.18	37.024	-107.588	
600.0	0.00	0.00	600.0	0.0	0.0	2,192,025.35	571,642.18	37.024	-107.588	
700.0	0.00	0.00	700.0	0.0	0.0	2,192,025.35	571,642.18	37.024	-107.588	
743.0	0.00	0.00	743.0	0.0	0.0	2,192,025.35	571,642.18	37.024	-107.588	
800.0	1.43	113.00	800.0	-0.3	0.7	2,192,025.07	571,642.84	37.024	-107.588	
900.0	3.93	113.00	899.9	-2.1	4.9	2,192,023.25	571,647.13	37.024	-107.588	
1,000.0	6.43	113.00	999.5	-5.6	13.3	2,192,019.73	571,655.43	37.024	-107.588	
1,100.0	8.93	113.00	1,098.6	-10.8	25.5	2,192,014.51	571,667.72	37.024	-107.588	
1,200.0	11.43	113.00	1,197.0	-17.7	41.8	2,192,007.61	571,683.98	37.024	-107.588	
1,300.0	13.93	113.00	1,294.5	-26.3	62.0	2,191,999.03	571,704.18	37.024	-107.588	
1,400.0	16.43	113.00	1,391.0	-36.5	86.1	2,191,988.81	571,728.27	37.024	-107.588	
1,500.0	18.93	113.00	1,486.3	-48.4	114.0	2,191,976.95	571,756.21	37.024	-107.588	
1,600.0	21.43	113.00	1,580.2	-61.9	145.8	2,191,963.47	571,787.96	37.024	-107.587	
1,700.0	23.93	113.00	1,672.4	-76.9	181.3	2,191,948.41	571,823.44	37.024	-107.587	
1,800.0	26.43	113.00	1,762.9	-93.6	220.4	2,191,931.79	571,862.59	37.024	-107.587	
1,900.0	28.93	113.00	1,851.5	-111.7	263.2	2,191,913.65	571,905.33	37.023	-107.587	
2,000.0	31.43	113.00	1,937.9	-131.3	309.4	2,191,894.01	571,951.59	37.023	-107.587	
2,100.0	33.93	113.00	2,022.1	-152.4	359.1	2,191,872.92	572,001.28	37.023	-107.587	
2,200.0	36.43	113.00	2,103.8	-174.9	412.2	2,191,850.41	572,054.30	37.023	-107.587	
2,300.0	38.93	113.00	2,183.0	-198.8	468.4	2,191,826.54	572,110.55	37.023	-107.586	
2,400.0	41.43	113.00	2,259.4	-224.0	527.8	2,191,801.33	572,169.93	37.023	-107.586	
2,500.0	43.93	113.00	2,332.9	-250.5	590.2	2,191,774.85	572,232.31	37.023	-107.586	
2,600.0	46.43	113.00	2,403.4	-278.2	655.5	2,191,747.14	572,297.59	37.023	-107.586	
2,700.0	48.93	113.00	2,470.7	-307.1	723.5	2,191,718.26	572,365.64	37.023	-107.585	
2,800.0	51.43	113.00	2,534.7	-337.1	794.2	2,191,688.26	572,436.32	37.023	-107.585	
2,900.0	53.93	113.00	2,595.4	-368.2	867.4	2,191,657.19	572,509.51	37.023	-107.585	
3,000.0	56.43	113.00	2,652.5	-400.3	943.0	2,191,625.12	572,585.06	37.023	-107.585	
3,100.0	58.93	113.00	2,705.9	-433.3	1,020.7	2,191,592.11	572,662.83	37.023	-107.584	
3,200.0	61.43	113.00	2,755.7	-467.2	1,100.6	2,191,558.22	572,742.68	37.023	-107.584	
3,300.0	63.93	113.00	2,801.6	-501.9	1,182.4	2,191,523.51	572,824.45	37.022	-107.584	
3,344.0	65.25	90.00	2,820.5	-517.4	1,218.9	2,191,507.98	572,861.02	37.022	-107.584	
3,350.0	65.69	90.02	2,822.9	-517.4	1,224.4	2,191,507.98	572,866.48	37.022	-107.584	
3,400.0	69.44	90.14	2,842.0	-517.5	1,270.6	2,191,507.92	572,912.69	37.022	-107.584	
3,450.0	73.19	90.26	2,858.0	-517.6	1,318.0	2,191,507.75	572,960.04	37.022	-107.583	
3,500.0	76.94	90.38	2,870.9	-517.9	1,366.3	2,191,507.48	573,008.34	37.022	-107.583	
3,550.0	80.69	90.49	2,880.6	-518.3	1,415.3	2,191,507.10	573,057.37	37.022	-107.583	
3,600.0	84.44	90.60	2,887.1	-518.8	1,464.9	2,191,506.63	573,106.94	37.022	-107.583	
3,650.0	88.18	90.71	2,890.3	-519.3	1,514.8	2,191,506.05	573,156.82	37.022	-107.583	
3,683.0	90.66	90.78	2,890.6	-519.8	1,547.8	2,191,505.62	573,189.82	37.022	-107.583	
3,700.0	90.66	90.78	2,890.4	-520.0	1,564.7	2,191,505.39	573,206.81	37.022	-107.583	
3,800.0	90.66	90.78	2,889.3	-521.4	1,664.7	2,191,504.02	573,306.78	37.022	-107.582	
3,900.0	90.66	90.78	2,888.1	-522.7	1,764.7	2,191,502.65	573,406.76	37.022	-107.582	
4,000.0	90.66	90.78	2,887.0	-524.1	1,864.7	2,191,501.28	573,506.73	37.022	-107.582	
4,100.0	90.66	90.78	2,885.8	-525.5	1,964.7	2,191,499.92	573,606.71	37.022	-107.581	
4,200.0	90.66	90.78	2,884.7	-526.8	2,064.7	2,191,498.55	573,706.69	37.022	-107.581	
4,300.0	90.66	90.78	2,883.5	-528.2	2,164.6	2,191,497.18	573,806.66	37.022	-107.581	
4,400.0	90.66	90.78	2,882.4	-529.6	2,264.6	2,191,495.81	573,906.64	37.022	-107.580	
4,500.0	90.66	90.78	2,881.2	-530.9	2,364.6	2,191,494.44	574,006.62	37.022	-107.580	
4,600.0	90.66	90.78	2,880.1	-532.3	2,464.6	2,191,493.07	574,106.59	37.022	-107.579	
4,700.0	90.66	90.78	2,878.9	-533.7	2,564.6	2,191,491.70	574,206.57	37.022	-107.579	

Halliburton

Planning Report - Geographic

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Southern Ute 705H
Company:	Hilcorp Energy Company	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Project:	Farmington, NM	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site:	San Juan Basin	North Reference:	Grid
Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral No.2		
Design:	WP2.1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
4,800.0	90.66	90.78	2,877.8	-535.1	2,664.6	2,191,490.34	574,306.54	37.022	-107.579	
4,900.0	90.66	90.78	2,876.6	-536.4	2,764.6	2,191,488.97	574,406.52	37.022	-107.578	
5,000.0	90.66	90.78	2,875.5	-537.8	2,864.5	2,191,487.60	574,506.50	37.022	-107.578	
5,100.0	90.66	90.78	2,874.3	-539.2	2,964.5	2,191,486.23	574,606.47	37.022	-107.578	
5,200.0	90.66	90.78	2,873.2	-540.5	3,064.5	2,191,484.86	574,706.45	37.022	-107.577	
5,300.0	90.66	90.78	2,872.0	-541.9	3,164.5	2,191,483.49	574,806.43	37.022	-107.577	
5,400.0	90.66	90.78	2,870.9	-543.3	3,264.5	2,191,482.12	574,906.40	37.022	-107.577	
5,500.0	90.66	90.78	2,869.7	-544.6	3,364.5	2,191,480.76	575,006.38	37.022	-107.576	
5,600.0	90.66	90.78	2,868.6	-546.0	3,464.4	2,191,479.39	575,106.35	37.022	-107.576	
5,700.0	90.66	90.78	2,867.4	-547.4	3,564.4	2,191,478.02	575,206.33	37.022	-107.576	
5,800.0	90.66	90.78	2,866.3	-548.7	3,664.4	2,191,476.65	575,306.31	37.022	-107.575	
5,900.0	90.66	90.78	2,865.1	-550.1	3,764.4	2,191,475.28	575,406.28	37.022	-107.575	
6,000.0	90.66	90.78	2,864.0	-551.5	3,864.4	2,191,473.91	575,506.26	37.022	-107.575	
6,100.0	90.66	90.78	2,862.8	-552.8	3,964.4	2,191,472.55	575,606.24	37.022	-107.574	
6,200.0	90.66	90.78	2,861.7	-554.2	4,064.3	2,191,471.18	575,706.21	37.022	-107.574	
6,300.0	90.66	90.78	2,860.5	-555.6	4,164.3	2,191,469.81	575,806.19	37.022	-107.574	
6,400.0	90.66	90.78	2,859.4	-557.0	4,264.3	2,191,468.44	575,906.16	37.022	-107.573	
6,500.0	90.66	90.78	2,858.2	-558.3	4,364.3	2,191,467.07	576,006.14	37.022	-107.573	
6,600.0	90.66	90.78	2,857.1	-559.7	4,464.3	2,191,465.70	576,106.12	37.022	-107.573	
6,700.0	90.66	90.78	2,855.9	-561.1	4,564.3	2,191,464.33	576,206.09	37.022	-107.572	
6,800.0	90.66	90.78	2,854.8	-562.4	4,664.2	2,191,462.97	576,306.07	37.022	-107.572	
6,900.0	90.66	90.78	2,853.6	-563.8	4,764.2	2,191,461.60	576,406.05	37.022	-107.572	
7,000.0	90.66	90.78	2,852.5	-565.2	4,864.2	2,191,460.23	576,506.02	37.022	-107.571	
7,100.0	90.66	90.78	2,851.3	-566.5	4,964.2	2,191,458.86	576,606.00	37.022	-107.571	
7,200.0	90.66	90.78	2,850.2	-567.9	5,064.2	2,191,457.49	576,705.97	37.022	-107.571	
7,214.0	90.66	90.78	2,850.0	-568.1	5,078.2	2,191,457.30	576,720.00	37.022	-107.571	

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	
TD (705H Lat.No.2) - plan hits target center - Point	0.00	0.00	2,850.0	-568.1	5,078.2	2,191,457.30	576,720.00	37.022	-107.571	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
3,300.0	2,801.6	-501.9	1,182.4	Tie On @ 3300' MD	
3,344.0	2,820.5	-517.4	1,218.9	BOW @ 3344' MD	
3,683.0	2,890.6	-519.8	1,547.8	EOB & SOH @ 3683' MD, 90.66° INC	
7,214.0	2,850.0	-568.1	5,078.2	PBHL @ 7214' MD	

Project: Farmington, NM
 Site: San Juan Basin
 Well: Southern Ute 705H
 Wellbore: Lateral No.2
 Design: WP2.1

17:56, February 17 2023

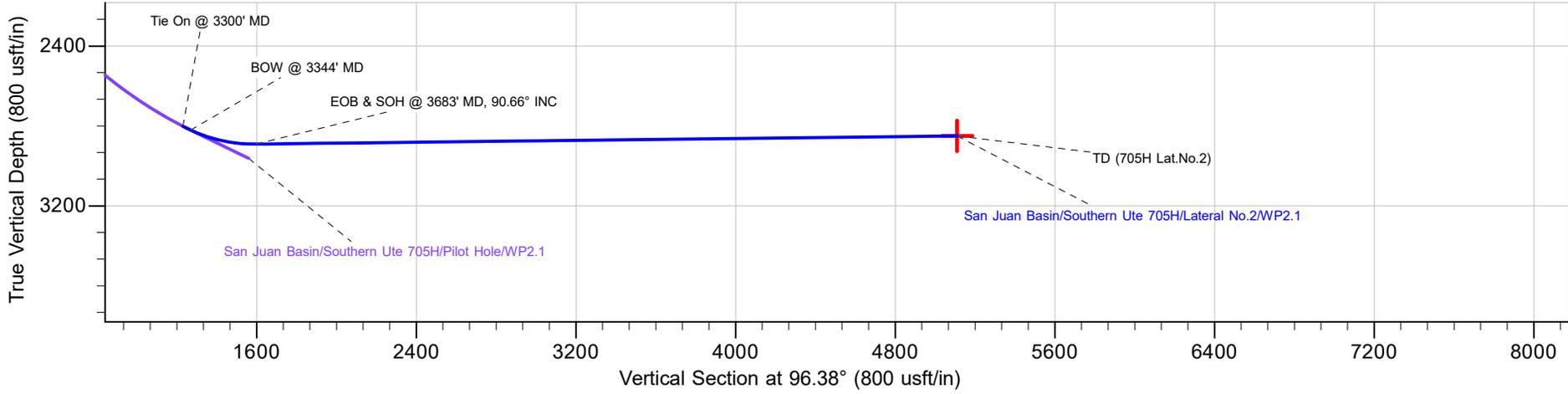
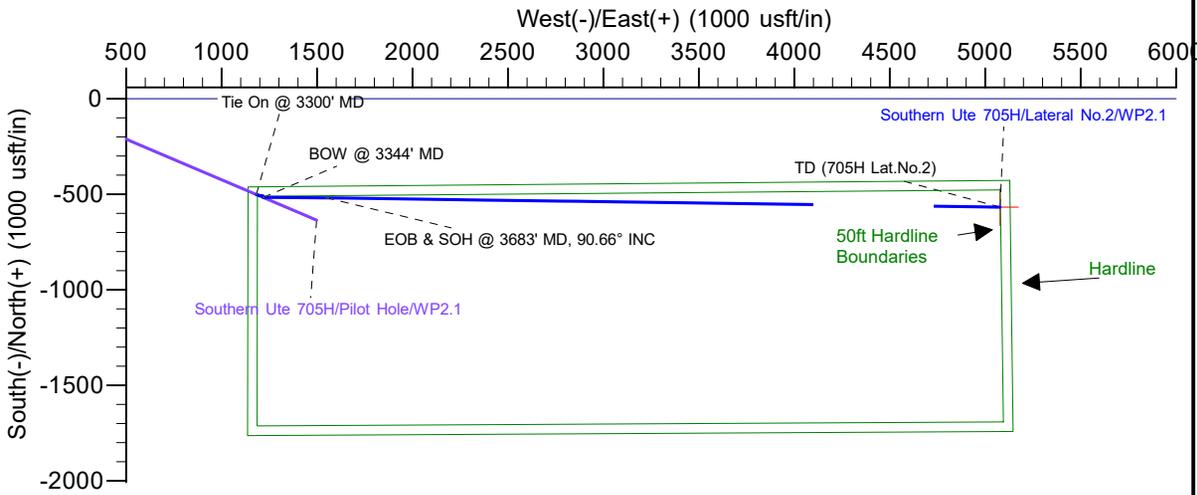
PROJECT DETAILS: Farmington, NM	
Geodetic System: US State Plane 1927 (Exact solution)	
Datum: NAD 1927 (NADCON CONUS)	
Ellipsoid: Clarke 1866	
Zone: New Mexico West 3003	
System Datum: Mean Sea Level	

WP2.1										
Surface Location:										
		Northing	Easting	Latitude	Longitude					
		2192025.35	571642.18	37.024	-107.588					
		Reference Elev'n:		RKB to MSL= 6310 @ 6310.0usft						
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
1	3300.0	63.93	113.00	2801.6	-501.9	1182.4	0.0	0.0	1230.8	Tie On @ 3300' MD
2	3344.0	65.25	90.00	2820.5	-517.4	1218.9	3.00	0.00	1268.9	BOW @ 3344' MD
3	3683.0	90.66	90.78	2890.6	-519.8	1547.8	7.50	1.83	1595.9	EOB & SOH @ 3683' MD, 90.66° INC
4	7214.0	90.66	90.78	2850.0	-568.1	5078.2	0.00	0.00	5109.9	PBHL @ 7214' MD



Reference is Grid North

BHL DETAILS	
MD:	7214.0ft
TVD:	2850.0ft
N/S:	-568.1ft
E/W:	5078.2ft
Northing:	2191457.30ft
Easting:	576720.00ft
Latitude:	37.022
Longitude:	-107.571



Hilcorp Energy Company

**Farmington, NM
San Juan Basin
Southern Ute 705H**

**Pilot Hole
WP2.1**

Anticollision Report

15 March, 2023

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Pilot Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Reference	WP2.1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 25.0usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 10,000.0usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Through Borehole Radius

Survey Tool Program	Date	3/14/2023		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	3,678.8	WP2.1 (Pilot Hole)	3_MWD+HRGM	B001Mb: HRGM declination correction only

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
San Juan Basin						
SOUTHERN UTE 005 - ST00 - ST00	3,678.8	3,379.0	737.4	-1,648.4	0.309	Collision RiskProcedures Re
SOUTHERN UTE 005A - ST00 - ST00	3,678.8	3,014.0	3,641.3	1,515.9	1.713	Collision RiskProcedures Re

Offset Design: San Juan Basin - SOUTHERN UTE 005 - ST00 - ST00													Offset Site Error:	5.0 usft		
Survey Program: 8325-3_Blind													Offset Well Error:		1.0 usft	
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning			
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)						
0.0	0.0	417.0	417.0	1.0	291.4	124.19	-1,271.7	1,871.8	2,263.0							
25.0	25.0	442.0	442.0	1.0	308.8	124.19	-1,271.7	1,871.8	2,263.0	1,950.9	312.04	7.252				
50.0	50.0	467.0	467.0	1.0	326.3	124.19	-1,271.7	1,871.8	2,263.0	1,933.4	329.52	6.867				
75.0	75.0	492.0	492.0	1.0	343.8	124.19	-1,271.7	1,871.8	2,263.0	1,915.9	347.00	6.521				
100.0	100.0	517.0	517.0	1.0	361.2	124.19	-1,271.7	1,871.8	2,263.0	1,898.5	364.49	6.208				
125.0	125.0	542.0	542.0	1.1	378.7	124.19	-1,271.7	1,871.8	2,263.0	1,881.0	381.99	5.924				
150.0	150.0	567.0	567.0	1.1	396.2	124.19	-1,271.7	1,871.8	2,263.0	1,863.5	399.50	5.665				
175.0	175.0	592.0	592.0	1.2	413.7	124.19	-1,271.7	1,871.8	2,263.0	1,845.9	417.01	5.427				
200.0	200.0	617.0	617.0	1.2	431.1	124.19	-1,271.7	1,871.8	2,263.0	1,828.4	434.52	5.208				
225.0	225.0	642.0	642.0	1.3	448.6	124.19	-1,271.7	1,871.8	2,263.0	1,810.9	452.04	5.006				
250.0	250.0	667.0	667.0	1.3	466.1	124.19	-1,271.7	1,871.8	2,263.0	1,793.4	469.57	4.819				
275.0	275.0	692.0	692.0	1.4	483.5	124.19	-1,271.7	1,871.8	2,263.0	1,775.9	487.10	4.646				
300.0	300.0	717.0	717.0	1.4	501.0	124.19	-1,271.7	1,871.8	2,263.0	1,758.3	504.63	4.484				
325.0	325.0	742.0	742.0	1.5	518.5	124.19	-1,271.7	1,871.8	2,263.0	1,740.8	522.16	4.334				
350.0	350.0	767.0	767.0	1.6	535.9	124.19	-1,271.7	1,871.8	2,263.0	1,723.3	539.70	4.193				
375.0	375.0	792.0	792.0	1.6	553.4	124.19	-1,271.7	1,871.8	2,263.0	1,705.7	557.23	4.061				
400.0	400.0	817.0	817.0	1.7	570.9	124.19	-1,271.7	1,871.8	2,263.0	1,688.2	574.77	3.937				
425.0	425.0	842.0	842.0	1.8	588.3	124.19	-1,271.7	1,871.8	2,263.0	1,670.6	592.32	3.821				
450.0	450.0	867.0	867.0	1.9	605.8	124.19	-1,271.7	1,871.8	2,263.0	1,653.1	609.86	3.711				
475.0	475.0	892.0	892.0	1.9	623.3	124.19	-1,271.7	1,871.8	2,263.0	1,635.5	627.40	3.607				
500.0	500.0	917.0	917.0	2.0	640.7	124.19	-1,271.7	1,871.8	2,263.0	1,618.0	644.95	3.509				
525.0	525.0	942.0	942.0	2.1	658.2	124.19	-1,271.7	1,871.8	2,263.0	1,600.5	662.50	3.416				
550.0	550.0	967.0	967.0	2.2	675.7	124.19	-1,271.7	1,871.8	2,263.0	1,582.9	680.04	3.328				
575.0	575.0	992.0	992.0	2.2	693.1	124.19	-1,271.7	1,871.8	2,263.0	1,565.4	697.59	3.244				
600.0	600.0	1,017.0	1,017.0	2.3	710.6	124.19	-1,271.7	1,871.8	2,263.0	1,547.8	715.14	3.164				

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Pilot Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - SOUTHERN UTE 005 - ST00 - ST00											Offset Site Error:	5.0 usft	
Survey Program: 8325-3_Blind											Offset Well Error:	1.0 usft	
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
625.0	625.0	1,042.0	1,042.0	2.4	728.1	124.19	-1,271.7	1,871.8	2,263.0	1,530.3	732.69	3.089	
650.0	650.0	1,067.0	1,067.0	2.5	745.6	124.19	-1,271.7	1,871.8	2,263.0	1,512.7	750.24	3.016	
675.0	675.0	1,092.0	1,092.0	2.6	763.0	124.19	-1,271.7	1,871.8	2,263.0	1,495.2	767.79	2.947	
700.0	700.0	1,117.0	1,117.0	2.7	780.5	124.19	-1,271.7	1,871.8	2,263.0	1,477.6	785.34	2.881	
725.0	725.0	1,142.0	1,142.0	2.7	798.0	124.19	-1,271.7	1,871.8	2,263.0	1,460.1	802.89	2.818	
743.0	743.0	1,160.0	1,160.0	2.8	810.5	124.19	-1,271.7	1,871.8	2,263.0	1,447.4	815.53	2.775	
750.0	750.0	1,167.0	1,167.0	2.8	815.4	11.19	-1,271.7	1,871.8	2,262.9	1,442.5	820.45	2.758	
775.0	775.0	1,192.0	1,192.0	2.9	832.9	11.19	-1,271.7	1,871.8	2,262.7	1,424.7	837.99	2.700	
800.0	800.0	1,217.0	1,217.0	3.0	850.4	11.20	-1,271.7	1,871.8	2,262.3	1,406.7	855.54	2.644	
825.0	825.0	1,242.0	1,242.0	3.1	867.8	11.21	-1,271.7	1,871.8	2,261.5	1,388.4	873.08	2.590	
850.0	850.0	1,267.0	1,267.0	3.1	885.3	11.22	-1,271.7	1,871.8	2,260.5	1,369.9	890.62	2.538	
875.0	874.9	1,291.9	1,291.9	3.2	902.7	11.23	-1,271.7	1,871.8	2,259.2	1,351.1	908.14	2.488	
900.0	899.9	1,316.9	1,316.9	3.3	920.2	11.24	-1,271.7	1,871.8	2,257.7	1,332.0	925.66	2.439	
925.0	924.8	1,341.8	1,341.8	3.4	937.6	11.26	-1,271.7	1,871.8	2,255.9	1,312.7	943.16	2.392	
950.0	949.7	1,366.7	1,366.7	3.5	955.0	11.28	-1,271.7	1,871.8	2,253.8	1,293.1	960.65	2.346	
975.0	974.6	1,391.6	1,391.6	3.6	972.4	11.31	-1,271.7	1,871.8	2,251.4	1,273.3	978.12	2.302	
1,000.0	999.5	1,416.5	1,416.5	3.6	989.7	11.33	-1,271.7	1,871.8	2,248.8	1,253.3	995.57	2.259	
1,025.0	1,024.3	1,441.3	1,441.3	3.7	1,007.1	11.36	-1,271.7	1,871.8	2,246.0	1,233.0	1,013.00	2.217	
1,050.0	1,049.1	1,466.1	1,466.1	3.8	1,024.4	11.39	-1,271.7	1,871.8	2,242.8	1,212.4	1,030.41	2.177	
1,075.0	1,073.8	1,490.8	1,490.8	3.9	1,041.7	11.43	-1,271.7	1,871.8	2,239.4	1,191.6	1,047.79	2.137	
1,100.0	1,098.6	1,515.6	1,515.6	4.0	1,059.0	11.47	-1,271.7	1,871.8	2,235.7	1,170.6	1,065.15	2.099	
1,125.0	1,123.2	1,540.2	1,540.2	4.1	1,076.2	11.51	-1,271.7	1,871.8	2,231.8	1,149.3	1,082.48	2.062	
1,150.0	1,147.9	1,564.9	1,564.9	4.2	1,093.4	11.55	-1,271.7	1,871.8	2,227.6	1,127.8	1,099.77	2.026	
1,175.0	1,172.4	1,589.4	1,589.4	4.3	1,110.6	11.60	-1,271.7	1,871.8	2,223.1	1,106.1	1,117.04	1.990	Collision RiskProcedures Req'd
1,200.0	1,197.0	1,614.0	1,614.0	4.3	1,127.7	11.64	-1,271.7	1,871.8	2,218.4	1,084.2	1,134.26	1.956	Collision RiskProcedures Req'd
1,225.0	1,221.5	1,638.5	1,638.5	4.4	1,144.9	11.70	-1,271.7	1,871.8	2,213.4	1,062.0	1,151.45	1.922	Collision RiskProcedures Req'd
1,250.0	1,245.9	1,662.9	1,662.9	4.5	1,161.9	11.75	-1,271.7	1,871.8	2,208.2	1,039.6	1,168.60	1.890	Collision RiskProcedures Req'd
1,275.0	1,270.2	1,687.2	1,687.2	4.6	1,178.9	11.81	-1,271.7	1,871.8	2,202.7	1,017.0	1,185.71	1.858	Collision RiskProcedures Req'd
1,300.0	1,294.5	1,711.5	1,711.5	4.7	1,195.9	11.87	-1,271.7	1,871.8	2,196.9	994.1	1,202.78	1.827	Collision RiskProcedures Req'd
1,325.0	1,318.8	1,735.8	1,735.8	4.8	1,212.8	11.94	-1,271.7	1,871.8	2,190.9	971.1	1,219.80	1.796	Collision RiskProcedures Req'd
1,350.0	1,342.9	1,759.9	1,759.9	5.0	1,229.7	12.01	-1,271.7	1,871.8	2,184.6	947.8	1,236.77	1.766	Collision RiskProcedures Req'd
1,375.0	1,367.0	1,784.0	1,784.0	5.1	1,246.6	12.08	-1,271.7	1,871.8	2,178.1	924.4	1,253.69	1.737	Collision RiskProcedures Req'd
1,400.0	1,391.0	1,808.0	1,808.0	5.2	1,263.3	12.15	-1,271.7	1,871.8	2,171.3	900.7	1,270.56	1.709	Collision RiskProcedures Req'd
1,425.0	1,415.0	1,832.0	1,832.0	5.3	1,280.1	12.23	-1,271.7	1,871.8	2,164.2	876.8	1,287.38	1.681	Collision RiskProcedures Req'd
1,450.0	1,438.8	1,855.8	1,855.8	5.4	1,296.7	12.31	-1,271.7	1,871.8	2,156.9	852.8	1,304.15	1.654	Collision RiskProcedures Req'd
1,475.0	1,462.6	1,879.6	1,879.6	5.5	1,313.4	12.40	-1,271.7	1,871.8	2,149.4	828.5	1,320.85	1.627	Collision RiskProcedures Req'd
1,500.0	1,486.3	1,903.3	1,903.3	5.6	1,329.9	12.49	-1,271.7	1,871.8	2,141.6	804.1	1,337.49	1.601	Collision RiskProcedures Req'd
1,525.0	1,509.9	1,926.9	1,926.9	5.8	1,346.4	12.59	-1,271.7	1,871.8	2,133.5	779.4	1,354.08	1.576	Collision RiskProcedures Req'd
1,550.0	1,533.4	1,950.4	1,950.4	5.9	1,362.8	12.68	-1,271.7	1,871.8	2,125.2	754.6	1,370.60	1.551	Collision RiskProcedures Req'd
1,575.0	1,556.8	1,973.8	1,973.8	6.0	1,379.2	12.79	-1,271.7	1,871.8	2,116.6	729.6	1,387.06	1.526	Collision RiskProcedures Req'd
1,600.0	1,580.2	1,997.2	1,997.2	6.1	1,395.5	12.89	-1,271.7	1,871.8	2,107.8	704.4	1,403.44	1.502	Collision RiskProcedures Req'd
1,625.0	1,603.4	2,020.4	2,020.4	6.3	1,411.7	13.00	-1,271.7	1,871.8	2,098.8	679.0	1,419.76	1.478	Collision RiskProcedures Req'd
1,650.0	1,626.5	2,043.5	2,043.5	6.4	1,427.9	13.12	-1,271.7	1,871.8	2,089.5	653.5	1,436.01	1.455	Collision RiskProcedures Req'd
1,675.0	1,649.5	2,066.5	2,066.5	6.6	1,444.0	13.24	-1,271.7	1,871.8	2,079.9	627.7	1,452.19	1.432	Collision RiskProcedures Req'd
1,700.0	1,672.4	2,089.4	2,089.4	6.7	1,460.0	13.36	-1,271.7	1,871.8	2,070.1	601.8	1,468.28	1.410	Collision RiskProcedures Req'd
1,725.0	1,695.2	2,112.2	2,112.2	6.9	1,475.9	13.49	-1,271.7	1,871.8	2,060.1	575.8	1,484.31	1.388	Collision RiskProcedures Req'd
1,750.0	1,717.9	2,134.9	2,134.9	7.0	1,491.7	13.63	-1,271.7	1,871.8	2,049.8	549.6	1,500.25	1.366	Collision RiskProcedures Req'd
1,775.0	1,740.5	2,157.5	2,157.5	7.2	1,507.5	13.77	-1,271.7	1,871.8	2,039.3	523.2	1,516.12	1.345	Collision RiskProcedures Req'd
1,800.0	1,762.9	2,179.9	2,179.9	7.3	1,523.2	13.91	-1,271.7	1,871.8	2,028.6	496.7	1,531.90	1.324	Collision RiskProcedures Req'd
1,825.0	1,785.3	2,202.3	2,202.3	7.5	1,538.8	14.06	-1,271.7	1,871.8	2,017.6	470.0	1,547.59	1.304	Collision RiskProcedures Req'd
1,850.0	1,807.5	2,224.5	2,224.5	7.7	1,554.3	14.22	-1,271.7	1,871.8	2,006.4	443.2	1,563.21	1.284	Collision RiskProcedures Req'd
1,875.0	1,829.5	2,246.5	2,246.5	7.9	1,569.7	14.38	-1,271.7	1,871.8	1,994.9	416.2	1,578.73	1.264	Collision RiskProcedures Req'd

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Pilot Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - SOUTHERN UTE 005 - ST00 - ST00												Offset Site Error:	5.0 usft	
Survey Program: 8325-3_Blind										Rule Assigned:		Offset Well Error:		1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
1,900.0	1,851.5	2,268.5	2,268.5	8.0	1,585.1	14.55	-1,271.7	1,871.8	1,983.3	389.1	1,594.16	1.244	Collision RiskProcedures Req'd	
1,925.0	1,873.3	2,290.3	2,290.3	8.2	1,600.3	14.72	-1,271.7	1,871.8	1,971.4	361.9	1,609.50	1.225	Collision RiskProcedures Req'd	
1,950.0	1,895.0	2,312.0	2,312.0	8.4	1,615.5	14.90	-1,271.7	1,871.8	1,959.2	334.5	1,624.75	1.206	Collision RiskProcedures Req'd	
1,975.0	1,916.5	2,333.5	2,333.5	8.6	1,630.5	15.09	-1,271.7	1,871.8	1,946.9	307.0	1,639.90	1.187	Collision RiskProcedures Req'd	
2,000.0	1,937.9	2,354.9	2,354.9	8.8	1,645.5	15.28	-1,271.7	1,871.8	1,934.3	279.3	1,654.96	1.169	Collision RiskProcedures Req'd	
2,025.0	1,959.2	2,376.2	2,376.2	9.0	1,660.3	15.48	-1,271.7	1,871.8	1,921.5	251.6	1,669.92	1.151	Collision RiskProcedures Req'd	
2,050.0	1,980.3	2,397.3	2,397.3	9.2	1,675.1	15.69	-1,271.7	1,871.8	1,908.5	223.7	1,684.78	1.133	Collision RiskProcedures Req'd	
2,075.0	2,001.3	2,418.3	2,418.3	9.5	1,689.7	15.91	-1,271.7	1,871.8	1,895.2	195.7	1,699.53	1.115	Collision RiskProcedures Req'd	
2,100.0	2,022.1	2,439.1	2,439.1	9.7	1,704.3	16.14	-1,271.7	1,871.8	1,881.8	167.6	1,714.18	1.098	Collision RiskProcedures Req'd	
2,125.0	2,042.8	2,459.8	2,459.8	9.9	1,718.7	16.37	-1,271.7	1,871.8	1,868.1	139.4	1,728.73	1.081	Collision RiskProcedures Req'd	
2,150.0	2,063.3	2,480.3	2,480.3	10.1	1,733.1	16.61	-1,271.7	1,871.8	1,854.2	111.0	1,743.16	1.064	Collision RiskProcedures Req'd	
2,175.0	2,083.6	2,500.6	2,500.6	10.4	1,747.3	16.86	-1,271.7	1,871.8	1,840.1	82.6	1,757.49	1.047	Collision RiskProcedures Req'd	
2,200.0	2,103.8	2,520.8	2,520.8	10.6	1,761.4	17.12	-1,271.7	1,871.8	1,825.8	54.1	1,771.71	1.031	Collision RiskProcedures Req'd	
2,225.0	2,123.9	2,540.9	2,540.9	10.9	1,775.4	17.39	-1,271.7	1,871.8	1,811.3	25.5	1,785.82	1.014	Collision RiskProcedures Req'd	
2,250.0	2,143.7	2,560.7	2,560.7	11.1	1,789.3	17.67	-1,271.7	1,871.8	1,796.6	-3.2	1,799.81	0.998	Collision RiskProcedures Req'd	
2,275.0	2,163.4	2,580.4	2,580.4	11.4	1,803.0	17.96	-1,271.7	1,871.8	1,781.7	-32.0	1,813.69	0.982	Collision RiskProcedures Req'd	
2,300.0	2,183.0	2,600.0	2,600.0	11.6	1,816.7	18.26	-1,271.7	1,871.8	1,766.5	-60.9	1,827.44	0.967	Collision RiskProcedures Req'd	
2,325.0	2,202.3	2,619.3	2,619.3	11.9	1,830.2	18.57	-1,271.7	1,871.8	1,751.2	-89.9	1,841.09	0.951	Collision RiskProcedures Req'd	
2,350.0	2,221.5	2,638.5	2,638.5	12.2	1,843.6	18.90	-1,271.7	1,871.8	1,735.7	-118.9	1,854.61	0.936	Collision RiskProcedures Req'd	
2,375.0	2,240.5	2,657.5	2,657.5	12.5	1,856.9	19.23	-1,271.7	1,871.8	1,720.0	-148.0	1,868.01	0.921	Collision RiskProcedures Req'd	
2,400.0	2,259.4	2,676.4	2,676.4	12.8	1,870.1	19.58	-1,271.7	1,871.8	1,704.1	-177.1	1,881.28	0.906	Collision RiskProcedures Req'd	
2,425.0	2,278.0	2,695.0	2,695.0	13.1	1,883.1	19.95	-1,271.7	1,871.8	1,688.1	-206.4	1,894.43	0.891	Collision RiskProcedures Req'd	
2,450.0	2,296.5	2,713.5	2,713.5	13.4	1,896.0	20.32	-1,271.7	1,871.8	1,671.8	-235.7	1,907.46	0.876	Collision RiskProcedures Req'd	
2,475.0	2,314.8	2,731.8	2,731.8	13.7	1,908.8	20.71	-1,271.7	1,871.8	1,655.4	-265.0	1,920.36	0.862	Collision RiskProcedures Req'd	
2,500.0	2,332.9	2,749.9	2,749.9	14.0	1,921.4	21.12	-1,271.7	1,871.8	1,638.7	-294.4	1,933.12	0.848	Collision RiskProcedures Req'd	
2,525.0	2,350.8	2,767.8	2,767.8	14.3	1,934.0	21.54	-1,271.7	1,871.8	1,621.9	-323.8	1,945.76	0.834	Collision RiskProcedures Req'd	
2,550.0	2,368.5	2,785.5	2,785.5	14.6	1,946.3	21.98	-1,271.7	1,871.8	1,605.0	-353.3	1,958.27	0.820	Collision RiskProcedures Req'd	
2,575.0	2,386.0	2,803.0	2,803.0	14.9	1,958.6	22.44	-1,271.7	1,871.8	1,587.8	-382.8	1,970.64	0.806	Collision RiskProcedures Req'd	
2,600.0	2,403.4	2,820.4	2,820.4	15.3	1,970.7	22.91	-1,271.7	1,871.8	1,570.5	-412.4	1,982.88	0.792	Collision RiskProcedures Req'd	
2,625.0	2,420.5	2,837.5	2,837.5	15.6	1,982.7	23.40	-1,271.7	1,871.8	1,553.1	-441.9	1,994.98	0.778	Collision RiskProcedures Req'd	
2,650.0	2,437.4	2,854.4	2,854.4	16.0	1,994.5	23.91	-1,271.7	1,871.8	1,535.4	-471.5	2,006.95	0.765	Collision RiskProcedures Req'd	
2,675.0	2,454.2	2,871.2	2,871.2	16.3	2,006.2	24.44	-1,271.7	1,871.8	1,517.6	-501.1	2,018.77	0.752	Collision RiskProcedures Req'd	
2,700.0	2,470.7	2,887.7	2,887.7	16.6	2,017.7	25.00	-1,271.7	1,871.8	1,499.7	-530.8	2,030.46	0.739	Collision RiskProcedures Req'd	
2,725.0	2,487.0	2,904.0	2,904.0	17.0	2,029.2	25.57	-1,271.7	1,871.8	1,481.6	-560.4	2,042.01	0.726	Collision RiskProcedures Req'd	
2,750.0	2,503.1	2,920.1	2,920.1	17.4	2,040.4	26.17	-1,271.7	1,871.8	1,463.4	-590.1	2,053.41	0.713	Collision RiskProcedures Req'd	
2,775.0	2,519.0	2,936.0	2,936.0	17.8	2,051.5	26.79	-1,271.7	1,871.8	1,445.0	-619.7	2,064.67	0.700	Collision RiskProcedures Req'd	
2,800.0	2,534.7	2,951.7	2,951.7	18.1	2,062.5	27.43	-1,271.7	1,871.8	1,426.4	-649.3	2,075.79	0.687	Collision RiskProcedures Req'd	
2,825.0	2,550.2	2,967.2	2,967.2	18.5	2,073.3	28.10	-1,271.7	1,871.8	1,407.8	-679.0	2,086.76	0.675	Collision RiskProcedures Req'd	
2,850.0	2,565.5	2,982.5	2,982.5	18.9	2,084.0	28.80	-1,271.7	1,871.8	1,389.0	-708.6	2,097.59	0.662	Collision RiskProcedures Req'd	
2,875.0	2,580.5	2,997.5	2,997.5	19.3	2,094.5	29.53	-1,271.7	1,871.8	1,370.1	-738.2	2,108.27	0.650	Collision RiskProcedures Req'd	
2,900.0	2,595.4	3,012.4	3,012.4	19.7	2,104.9	30.28	-1,271.7	1,871.8	1,351.0	-767.8	2,118.79	0.638	Collision RiskProcedures Req'd	
2,925.0	2,610.0	3,027.0	3,027.0	20.1	2,115.1	31.06	-1,271.7	1,871.8	1,331.8	-797.3	2,129.18	0.626	Collision RiskProcedures Req'd	
2,950.0	2,624.4	3,041.4	3,041.4	20.5	2,125.1	31.88	-1,271.7	1,871.8	1,312.6	-826.8	2,139.41	0.614	Collision RiskProcedures Req'd	
2,975.0	2,638.5	3,055.5	3,055.5	20.9	2,135.0	32.72	-1,271.7	1,871.8	1,293.2	-856.3	2,149.49	0.602	Collision RiskProcedures Req'd	
3,000.0	2,652.5	3,069.5	3,069.5	21.3	2,144.8	33.60	-1,271.7	1,871.8	1,273.7	-885.8	2,159.42	0.590	Collision RiskProcedures Req'd	
3,025.0	2,666.2	3,083.2	3,083.2	21.8	2,154.3	34.51	-1,271.7	1,871.8	1,254.1	-915.1	2,169.20	0.578	Collision RiskProcedures Req'd	
3,050.0	2,679.7	3,096.7	3,096.7	22.2	2,163.8	35.45	-1,271.7	1,871.8	1,234.4	-944.5	2,178.82	0.567	Collision RiskProcedures Req'd	
3,075.0	2,692.9	3,109.9	3,109.9	22.6	2,173.0	36.43	-1,271.7	1,871.8	1,214.6	-973.7	2,188.30	0.555	Collision RiskProcedures Req'd	
3,100.0	2,705.9	3,122.9	3,122.9	23.1	2,182.1	37.45	-1,271.7	1,871.8	1,194.7	-1,002.9	2,197.61	0.544	Collision RiskProcedures Req'd	
3,125.0	2,718.7	3,135.7	3,135.7	23.5	2,191.1	38.50	-1,271.7	1,871.8	1,174.8	-1,032.0	2,206.78	0.532	Collision RiskProcedures Req'd	
3,150.0	2,731.3	3,148.3	3,148.3	24.0	2,199.8	39.59	-1,271.7	1,871.8	1,154.7	-1,061.1	2,215.79	0.521	Collision RiskProcedures Req'd	
3,175.0	2,743.6	3,160.6	3,160.6	24.4	2,208.4	40.72	-1,271.7	1,871.8	1,134.6	-1,090.0	2,224.64	0.510	Collision RiskProcedures Req'd	

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Pilot Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - SOUTHERN UTE 005 - ST00 - ST00											Offset Site Error: 5.0 usft		
Survey Program: 8325-3_Blind											Offset Well Error: 1.0 usft		
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
3,200.0	2,755.7	3,172.7	3,172.7	24.9	2,216.9	41.88	-1,271.7	1,871.8	1,114.5	-1,118.8	2,233.34	0.499	Collision RiskProcedures Req'd
3,225.0	2,767.5	3,184.5	3,184.5	25.3	2,225.1	43.08	-1,271.7	1,871.8	1,094.3	-1,147.6	2,241.88	0.488	Collision RiskProcedures Req'd
3,250.0	2,779.1	3,196.1	3,196.1	25.8	2,233.2	44.31	-1,271.7	1,871.8	1,074.0	-1,176.2	2,250.27	0.477	Collision RiskProcedures Req'd
3,275.0	2,790.5	3,207.5	3,207.5	26.3	2,241.2	45.58	-1,271.7	1,871.8	1,053.8	-1,204.7	2,258.50	0.467	Collision RiskProcedures Req'd
3,300.0	2,801.6	3,218.6	3,218.6	26.7	2,248.9	46.89	-1,271.7	1,871.8	1,033.4	-1,233.1	2,266.58	0.456	Collision RiskProcedures Req'd
3,325.0	2,812.4	3,229.4	3,229.4	27.2	2,256.5	48.23	-1,271.7	1,871.8	1,013.1	-1,261.4	2,274.50	0.445	Collision RiskProcedures Req'd
3,343.0	2,820.1	3,237.1	3,237.1	27.6	2,261.9	49.22	-1,271.7	1,871.8	998.5	-1,281.6	2,280.11	0.438	Collision RiskProcedures Req'd
3,350.0	2,823.1	3,240.1	3,240.1	27.7	2,264.0	49.42	-1,271.7	1,871.8	992.8	-1,289.5	2,282.27	0.435	Collision RiskProcedures Req'd
3,375.0	2,833.6	3,250.6	3,250.6	28.2	2,271.3	50.14	-1,271.7	1,871.8	972.5	-1,317.5	2,290.02	0.425	Collision RiskProcedures Req'd
3,400.0	2,844.2	3,261.2	3,261.2	28.7	2,278.7	50.89	-1,271.7	1,871.8	952.3	-1,345.4	2,297.78	0.414	Collision RiskProcedures Req'd
3,425.0	2,854.8	3,271.8	3,271.8	29.1	2,286.1	51.65	-1,271.7	1,871.8	932.3	-1,373.3	2,305.56	0.404	Collision RiskProcedures Req'd
3,450.0	2,865.3	3,282.3	3,282.3	29.6	2,293.5	52.43	-1,271.7	1,871.8	912.4	-1,401.0	2,313.36	0.394	Collision RiskProcedures Req'd
3,475.0	2,875.9	3,292.9	3,292.9	30.1	2,300.9	53.22	-1,271.7	1,871.8	892.6	-1,428.6	2,321.18	0.385	Collision RiskProcedures Req'd
3,500.0	2,886.5	3,303.5	3,303.5	30.6	2,308.3	54.03	-1,271.7	1,871.8	872.9	-1,456.1	2,329.03	0.375	Collision RiskProcedures Req'd
3,525.0	2,897.0	3,314.0	3,314.0	31.1	2,315.6	54.85	-1,271.7	1,871.8	853.4	-1,483.5	2,336.90	0.365	Collision RiskProcedures Req'd
3,550.0	2,907.6	3,324.6	3,324.6	31.6	2,323.0	55.70	-1,271.7	1,871.8	834.1	-1,510.7	2,344.79	0.356	Collision RiskProcedures Req'd
3,575.0	2,918.2	3,335.2	3,335.2	32.1	2,330.4	56.56	-1,271.7	1,871.8	814.9	-1,537.8	2,352.71	0.346	Collision RiskProcedures Req'd
3,600.0	2,928.7	3,345.7	3,345.7	32.6	2,337.8	57.44	-1,271.7	1,871.8	795.9	-1,564.7	2,360.66	0.337	Collision RiskProcedures Req'd
3,625.0	2,939.3	3,356.3	3,356.3	33.1	2,345.2	58.33	-1,271.7	1,871.8	777.1	-1,591.5	2,368.63	0.328	Collision RiskProcedures Req'd
3,650.0	2,949.8	3,366.8	3,366.8	33.6	2,352.5	59.25	-1,271.7	1,871.8	758.5	-1,618.1	2,376.64	0.319	Collision RiskProcedures Req'd
3,675.0	2,960.4	3,377.4	3,377.4	34.1	2,359.9	60.18	-1,271.7	1,871.8	740.2	-1,644.5	2,384.67	0.310	Collision RiskProcedures Req'd
3,678.8	2,962.0	3,379.0	3,379.0	34.1	2,361.0	60.32	-1,271.7	1,871.8	737.4	-1,648.4	2,385.88	0.309	Collision RiskProcedures Req'd, CC, E

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Pilot Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - SOUTHERN UTE 005A - ST00 - ST00													Offset Site Error:	5.0 usft
Survey Program: 5719-3_Blind											Rule Assigned:		Offset Well Error:	1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	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	
0.0	0.0	52.0	52.0	1.0	36.3	94.78	-429.1	5,133.6	5,151.5					
25.0	25.0	77.0	77.0	1.0	53.8	94.78	-429.1	5,133.6	5,151.5	5,094.6	56.97	90.428		
50.0	50.0	102.0	102.0	1.0	71.2	94.78	-429.1	5,133.6	5,151.5	5,077.1	74.43	69.215		
75.0	75.0	127.0	127.0	1.0	88.7	94.78	-429.1	5,133.6	5,151.5	5,059.6	91.90	56.059		
100.0	100.0	152.0	152.0	1.0	106.1	94.78	-429.1	5,133.6	5,151.5	5,042.2	109.37	47.102		
125.0	125.0	177.0	177.0	1.1	123.6	94.78	-429.1	5,133.6	5,151.5	5,024.7	126.85	40.610		
150.0	150.0	202.0	202.0	1.1	141.0	94.78	-429.1	5,133.6	5,151.5	5,007.2	144.34	35.689		
175.0	175.0	227.0	227.0	1.2	158.5	94.78	-429.1	5,133.6	5,151.5	4,989.7	161.84	31.831		
200.0	200.0	252.0	252.0	1.2	175.9	94.78	-429.1	5,133.6	5,151.5	4,972.2	179.34	28.725		
225.0	225.0	277.0	277.0	1.3	193.4	94.78	-429.1	5,133.6	5,151.5	4,954.7	196.85	26.170		
250.0	250.0	302.0	302.0	1.3	210.8	94.78	-429.1	5,133.6	5,151.5	4,937.2	214.36	24.033		
275.0	275.0	327.0	327.0	1.4	228.3	94.78	-429.1	5,133.6	5,151.5	4,919.7	231.87	22.217		
300.0	300.0	352.0	352.0	1.4	245.8	94.78	-429.1	5,133.6	5,151.5	4,902.2	249.39	20.657		
325.0	325.0	377.0	377.0	1.5	263.2	94.78	-429.1	5,133.6	5,151.5	4,884.6	266.90	19.301		
350.0	350.0	402.0	402.0	1.6	280.7	94.78	-429.1	5,133.6	5,151.5	4,867.1	284.43	18.112		
375.0	375.0	427.0	427.0	1.6	298.1	94.78	-429.1	5,133.6	5,151.5	4,849.6	301.95	17.061		
400.0	400.0	452.0	452.0	1.7	315.6	94.78	-429.1	5,133.6	5,151.5	4,832.1	319.48	16.125		
425.0	425.0	477.0	477.0	1.8	333.0	94.78	-429.1	5,133.6	5,151.5	4,814.5	337.00	15.286		
450.0	450.0	502.0	502.0	1.9	350.5	94.78	-429.1	5,133.6	5,151.5	4,797.0	354.53	14.531		
475.0	475.0	527.0	527.0	1.9	367.9	94.78	-429.1	5,133.6	5,151.5	4,779.5	372.06	13.846		
500.0	500.0	552.0	552.0	2.0	385.4	94.78	-429.1	5,133.6	5,151.5	4,761.9	389.59	13.223		
525.0	525.0	577.0	577.0	2.1	402.8	94.78	-429.1	5,133.6	5,151.5	4,744.4	407.13	12.653		
550.0	550.0	602.0	602.0	2.2	420.3	94.78	-429.1	5,133.6	5,151.5	4,726.9	424.66	12.131		
575.0	575.0	627.0	627.0	2.2	437.7	94.78	-429.1	5,133.6	5,151.5	4,709.3	442.19	11.650		
600.0	600.0	652.0	652.0	2.3	455.2	94.78	-429.1	5,133.6	5,151.5	4,691.8	459.73	11.206		
625.0	625.0	677.0	677.0	2.4	472.7	94.78	-429.1	5,133.6	5,151.5	4,674.3	477.26	10.794		
650.0	650.0	702.0	702.0	2.5	490.1	94.78	-429.1	5,133.6	5,151.5	4,656.7	494.80	10.411		
675.0	675.0	727.0	727.0	2.6	507.6	94.78	-429.1	5,133.6	5,151.5	4,639.2	512.33	10.055		
700.0	700.0	752.0	752.0	2.7	525.0	94.78	-429.1	5,133.6	5,151.5	4,621.7	529.87	9.722		
725.0	725.0	777.0	777.0	2.7	542.5	94.78	-429.1	5,133.6	5,151.5	4,604.1	547.41	9.411		
743.0	743.0	795.0	795.0	2.8	555.0	94.78	-429.1	5,133.6	5,151.5	4,591.5	560.04	9.199		
750.0	750.0	802.0	802.0	2.8	559.9	-18.22	-429.1	5,133.6	5,151.5	4,586.6	564.95	9.119		
775.0	775.0	827.0	827.0	2.9	577.4	-18.22	-429.1	5,133.6	5,151.3	4,568.8	582.48	8.844		
800.0	800.0	852.0	852.0	3.0	594.8	-18.23	-429.1	5,133.6	5,150.9	4,550.9	600.01	8.585		
825.0	825.0	877.0	877.0	3.1	612.3	-18.24	-429.1	5,133.6	5,150.1	4,532.6	617.54	8.340		
850.0	850.0	902.0	902.0	3.1	629.7	-18.25	-429.1	5,133.6	5,149.2	4,514.1	635.06	8.108		
875.0	874.9	926.9	926.9	3.2	647.1	-18.26	-429.1	5,133.6	5,147.9	4,495.4	652.57	7.889		
900.0	899.9	951.9	951.9	3.3	664.6	-18.28	-429.1	5,133.6	5,146.4	4,476.4	670.07	7.680		
925.0	924.8	976.8	976.8	3.4	682.0	-18.30	-429.1	5,133.6	5,144.7	4,457.1	687.56	7.483		
950.0	949.7	1,001.7	1,001.7	3.5	699.4	-18.32	-429.1	5,133.6	5,142.7	4,437.6	705.03	7.294		
975.0	974.6	1,026.6	1,026.6	3.6	716.7	-18.35	-429.1	5,133.6	5,140.4	4,417.9	722.49	7.115		
1,000.0	999.5	1,051.5	1,051.5	3.6	734.1	-18.38	-429.1	5,133.6	5,137.9	4,397.9	739.93	6.944		
1,025.0	1,024.3	1,076.3	1,076.3	3.7	751.4	-18.41	-429.1	5,133.6	5,135.1	4,377.7	757.34	6.780		
1,050.0	1,049.1	1,101.1	1,101.1	3.8	768.7	-18.45	-429.1	5,133.6	5,132.0	4,357.3	774.74	6.624		
1,075.0	1,073.8	1,125.8	1,125.8	3.9	786.0	-18.49	-429.1	5,133.6	5,128.7	4,336.6	792.11	6.475		
1,100.0	1,098.6	1,150.6	1,150.6	4.0	803.3	-18.53	-429.1	5,133.6	5,125.2	4,315.7	809.45	6.332		
1,125.0	1,123.2	1,175.2	1,175.2	4.1	820.5	-18.57	-429.1	5,133.6	5,121.4	4,294.6	826.76	6.194		
1,150.0	1,147.9	1,199.9	1,199.9	4.2	837.7	-18.62	-429.1	5,133.6	5,117.3	4,273.3	844.05	6.063		
1,175.0	1,172.4	1,224.4	1,224.4	4.3	854.9	-18.67	-429.1	5,133.6	5,113.0	4,251.7	861.29	5.936		
1,200.0	1,197.0	1,249.0	1,249.0	4.3	872.0	-18.73	-429.1	5,133.6	5,108.4	4,229.9	878.51	5.815		
1,225.0	1,221.5	1,273.5	1,273.5	4.4	889.1	-18.78	-429.1	5,133.6	5,103.6	4,207.9	895.68	5.698		
1,250.0	1,245.9	1,297.9	1,297.9	4.5	906.1	-18.85	-429.1	5,133.6	5,098.5	4,185.7	912.82	5.585		

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Pilot Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - SOUTHERN UTE 005A - ST00 - ST00											Offset Site Error:	5.0 usft	
Survey Program: 5719-3_Blind											Offset Well Error:	1.0 usft	
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
1,275.0	1,270.2	1,322.2	1,322.2	4.6	923.1	-18.91	-429.1	5,133.6	5,093.2	4,163.3	929.92	5.477	
1,300.0	1,294.5	1,346.5	1,346.5	4.7	940.1	-18.98	-429.1	5,133.6	5,087.6	4,140.6	946.97	5.373	
1,325.0	1,318.8	1,370.8	1,370.8	4.8	957.0	-19.05	-429.1	5,133.6	5,081.8	4,117.8	963.98	5.272	
1,350.0	1,342.9	1,394.9	1,394.9	5.0	973.9	-19.12	-429.1	5,133.6	5,075.7	4,094.8	980.94	5.174	
1,375.0	1,367.0	1,419.0	1,419.0	5.1	990.7	-19.20	-429.1	5,133.6	5,069.4	4,071.5	997.85	5.080	
1,400.0	1,391.0	1,443.0	1,443.0	5.2	1,007.5	-19.28	-429.1	5,133.6	5,062.8	4,048.1	1,014.71	4.989	
1,425.0	1,415.0	1,467.0	1,467.0	5.3	1,024.2	-19.37	-429.1	5,133.6	5,056.0	4,024.4	1,031.51	4.901	
1,450.0	1,438.8	1,490.8	1,490.8	5.4	1,040.9	-19.46	-429.1	5,133.6	5,048.9	4,000.6	1,048.26	4.816	
1,475.0	1,462.6	1,514.6	1,514.6	5.5	1,057.5	-19.55	-429.1	5,133.6	5,041.6	3,976.6	1,064.96	4.734	
1,500.0	1,486.3	1,538.3	1,538.3	5.6	1,074.0	-19.65	-429.1	5,133.6	5,034.0	3,952.4	1,081.59	4.654	
1,525.0	1,509.9	1,561.9	1,561.9	5.8	1,090.5	-19.75	-429.1	5,133.6	5,026.2	3,928.0	1,098.17	4.577	
1,550.0	1,533.4	1,585.4	1,585.4	5.9	1,106.9	-19.85	-429.1	5,133.6	5,018.2	3,903.5	1,114.68	4.502	
1,575.0	1,556.8	1,608.8	1,608.8	6.0	1,123.2	-19.96	-429.1	5,133.6	5,009.9	3,878.8	1,131.12	4.429	
1,600.0	1,580.2	1,632.2	1,632.2	6.1	1,139.5	-20.08	-429.1	5,133.6	5,001.4	3,853.9	1,147.50	4.358	
1,625.0	1,603.4	1,655.4	1,655.4	6.3	1,155.7	-20.19	-429.1	5,133.6	4,992.6	3,828.8	1,163.81	4.290	
1,650.0	1,626.5	1,678.5	1,678.5	6.4	1,171.9	-20.31	-429.1	5,133.6	4,983.6	3,803.5	1,180.05	4.223	
1,675.0	1,649.5	1,701.5	1,701.5	6.6	1,187.9	-20.44	-429.1	5,133.6	4,974.4	3,778.1	1,196.21	4.158	
1,700.0	1,672.4	1,724.4	1,724.4	6.7	1,203.9	-20.57	-429.1	5,133.6	4,964.9	3,752.6	1,212.30	4.095	
1,725.0	1,695.2	1,747.2	1,747.2	6.9	1,219.9	-20.70	-429.1	5,133.6	4,955.2	3,726.9	1,228.32	4.034	
1,750.0	1,717.9	1,769.9	1,769.9	7.0	1,235.7	-20.84	-429.1	5,133.6	4,945.2	3,701.0	1,244.26	3.974	
1,775.0	1,740.5	1,792.5	1,792.5	7.2	1,251.4	-20.98	-429.1	5,133.6	4,935.1	3,675.0	1,260.11	3.916	
1,800.0	1,762.9	1,814.9	1,814.9	7.3	1,267.1	-21.13	-429.1	5,133.6	4,924.7	3,648.8	1,275.88	3.860	
1,825.0	1,785.3	1,837.3	1,837.3	7.5	1,282.7	-21.29	-429.1	5,133.6	4,914.0	3,622.5	1,291.58	3.805	
1,850.0	1,807.5	1,859.5	1,859.5	7.7	1,298.2	-21.44	-429.1	5,133.6	4,903.2	3,596.0	1,307.18	3.751	
1,875.0	1,829.5	1,881.5	1,881.5	7.9	1,313.6	-21.61	-429.1	5,133.6	4,892.1	3,569.4	1,322.70	3.699	
1,900.0	1,851.5	1,903.5	1,903.5	8.0	1,328.9	-21.77	-429.1	5,133.6	4,880.8	3,542.7	1,338.12	3.647	
1,925.0	1,873.3	1,925.3	1,925.3	8.2	1,344.2	-21.95	-429.1	5,133.6	4,869.3	3,515.8	1,353.46	3.598	
1,950.0	1,895.0	1,947.0	1,947.0	8.4	1,359.3	-22.13	-429.1	5,133.6	4,857.5	3,488.8	1,368.71	3.549	
1,975.0	1,916.5	1,968.5	1,968.5	8.6	1,374.3	-22.31	-429.1	5,133.6	4,845.6	3,461.7	1,383.86	3.501	
2,000.0	1,937.9	1,989.9	1,989.9	8.8	1,389.3	-22.50	-429.1	5,133.6	4,833.4	3,434.5	1,398.91	3.455	
2,025.0	1,959.2	2,011.2	2,011.2	9.0	1,404.1	-22.70	-429.1	5,133.6	4,821.0	3,407.1	1,413.86	3.410	
2,050.0	1,980.3	2,032.3	2,032.3	9.2	1,418.9	-22.90	-429.1	5,133.6	4,808.4	3,379.7	1,428.72	3.366	
2,075.0	2,001.3	2,053.3	2,053.3	9.5	1,433.5	-23.11	-429.1	5,133.6	4,795.6	3,352.1	1,443.47	3.322	
2,100.0	2,022.1	2,074.1	2,074.1	9.7	1,448.1	-23.32	-429.1	5,133.6	4,782.5	3,324.4	1,458.12	3.280	
2,125.0	2,042.8	2,094.8	2,094.8	9.9	1,462.5	-23.54	-429.1	5,133.6	4,769.3	3,296.6	1,472.66	3.239	
2,150.0	2,063.3	2,115.3	2,115.3	10.1	1,476.8	-23.77	-429.1	5,133.6	4,755.8	3,268.7	1,487.10	3.198	
2,175.0	2,083.6	2,135.6	2,135.6	10.4	1,491.0	-24.00	-429.1	5,133.6	4,742.2	3,240.7	1,501.43	3.158	
2,200.0	2,103.8	2,155.8	2,155.8	10.6	1,505.1	-24.24	-429.1	5,133.6	4,728.3	3,212.7	1,515.65	3.120	
2,225.0	2,123.9	2,175.9	2,175.9	10.9	1,519.1	-24.49	-429.1	5,133.6	4,714.3	3,184.5	1,529.76	3.082	
2,250.0	2,143.7	2,195.7	2,195.7	11.1	1,533.0	-24.75	-429.1	5,133.6	4,700.0	3,156.3	1,543.75	3.045	
2,275.0	2,163.4	2,215.4	2,215.4	11.4	1,546.7	-25.01	-429.1	5,133.6	4,685.6	3,127.9	1,557.63	3.008	
2,300.0	2,183.0	2,235.0	2,235.0	11.6	1,560.4	-25.28	-429.1	5,133.6	4,670.9	3,099.5	1,571.39	2.972	
2,325.0	2,202.3	2,254.3	2,254.3	11.9	1,573.9	-25.56	-429.1	5,133.6	4,656.1	3,071.0	1,585.04	2.938	
2,350.0	2,221.5	2,273.5	2,273.5	12.2	1,587.3	-25.84	-429.1	5,133.6	4,641.0	3,042.5	1,598.56	2.903	
2,375.0	2,240.5	2,292.5	2,292.5	12.5	1,600.6	-26.14	-429.1	5,133.6	4,625.8	3,013.9	1,611.96	2.870	
2,400.0	2,259.4	2,311.4	2,311.4	12.8	1,613.7	-26.44	-429.1	5,133.6	4,610.4	2,985.2	1,625.24	2.837	
2,425.0	2,278.0	2,330.0	2,330.0	13.1	1,626.7	-26.75	-429.1	5,133.6	4,594.8	2,956.4	1,638.40	2.804	
2,450.0	2,296.5	2,348.5	2,348.5	13.4	1,639.6	-27.07	-429.1	5,133.6	4,579.1	2,927.6	1,651.43	2.773	
2,475.0	2,314.8	2,366.8	2,366.8	13.7	1,652.4	-27.40	-429.1	5,133.6	4,563.1	2,898.8	1,664.33	2.742	
2,500.0	2,332.9	2,384.9	2,384.9	14.0	1,665.0	-27.74	-429.1	5,133.6	4,547.0	2,869.9	1,677.10	2.711	
2,525.0	2,350.8	2,402.8	2,402.8	14.3	1,677.5	-28.09	-429.1	5,133.6	4,530.7	2,840.9	1,689.74	2.681	
2,550.0	2,368.5	2,420.5	2,420.5	14.6	1,689.9	-28.45	-429.1	5,133.6	4,514.2	2,811.9	1,702.25	2.652	

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Pilot Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - SOUTHERN UTE 005A - ST00 - ST00													Offset Site Error:	5.0 usft
Survey Program: 5719-3_Blind											Rule Assigned:		Offset Well Error:	1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
2,575.0	2,386.0	2,438.0	2,438.0	14.9	1,702.2	-28.82	-429.1	5,133.6	4,497.5	2,782.9	1,714.63	2.623		
2,600.0	2,403.4	2,455.4	2,455.4	15.3	1,714.3	-29.20	-429.1	5,133.6	4,480.7	2,753.8	1,726.87	2.595		
2,625.0	2,420.5	2,472.5	2,472.5	15.6	1,726.2	-29.59	-429.1	5,133.6	4,463.7	2,724.8	1,738.98	2.567		
2,650.0	2,437.4	2,489.4	2,489.4	16.0	1,738.0	-29.99	-429.1	5,133.6	4,446.6	2,695.6	1,750.95	2.540		
2,675.0	2,454.2	2,506.2	2,506.2	16.3	1,749.7	-30.41	-429.1	5,133.6	4,429.3	2,666.5	1,762.78	2.513		
2,700.0	2,470.7	2,522.7	2,522.7	16.6	1,761.3	-30.83	-429.1	5,133.6	4,411.8	2,637.3	1,774.47	2.486		
2,725.0	2,487.0	2,539.0	2,539.0	17.0	1,772.7	-31.27	-429.1	5,133.6	4,394.2	2,608.2	1,786.02	2.460		
2,750.0	2,503.1	2,555.1	2,555.1	17.4	1,783.9	-31.72	-429.1	5,133.6	4,376.4	2,579.0	1,797.42	2.435		
2,775.0	2,519.0	2,571.0	2,571.0	17.8	1,795.0	-32.18	-429.1	5,133.6	4,358.5	2,549.8	1,808.68	2.410		
2,800.0	2,534.7	2,586.7	2,586.7	18.1	1,806.0	-32.66	-429.1	5,133.6	4,340.4	2,520.6	1,819.80	2.385		
2,825.0	2,550.2	2,602.2	2,602.2	18.5	1,816.8	-33.15	-429.1	5,133.6	4,322.2	2,491.4	1,830.77	2.361		
2,850.0	2,565.5	2,617.5	2,617.5	18.9	1,827.4	-33.65	-429.1	5,133.6	4,303.8	2,462.2	1,841.59	2.337		
2,875.0	2,580.5	2,632.5	2,632.5	19.3	1,837.9	-34.17	-429.1	5,133.6	4,285.3	2,433.1	1,852.26	2.314		
2,900.0	2,595.4	2,647.4	2,647.4	19.7	1,848.3	-34.70	-429.1	5,133.6	4,266.7	2,403.9	1,862.78	2.290		
2,925.0	2,610.0	2,662.0	2,662.0	20.1	1,858.5	-35.25	-429.1	5,133.6	4,247.9	2,374.7	1,873.16	2.268		
2,950.0	2,624.4	2,676.4	2,676.4	20.5	1,868.5	-35.81	-429.1	5,133.6	4,229.0	2,345.6	1,883.37	2.245		
2,975.0	2,638.5	2,690.5	2,690.5	20.9	1,878.4	-36.38	-429.1	5,133.6	4,210.0	2,316.5	1,893.44	2.223		
3,000.0	2,652.5	2,704.5	2,704.5	21.3	1,888.2	-36.98	-429.1	5,133.6	4,190.8	2,287.4	1,903.35	2.202		
3,025.0	2,666.2	2,718.2	2,718.2	21.8	1,897.7	-37.58	-429.1	5,133.6	4,171.5	2,258.4	1,913.10	2.180		
3,050.0	2,679.7	2,731.7	2,731.7	22.2	1,907.1	-38.21	-429.1	5,133.6	4,152.1	2,229.4	1,922.70	2.160		
3,075.0	2,692.9	2,744.9	2,744.9	22.6	1,916.4	-38.85	-429.1	5,133.6	4,132.6	2,200.4	1,932.13	2.139		
3,100.0	2,705.9	2,757.9	2,757.9	23.1	1,925.5	-39.51	-429.1	5,133.6	4,112.9	2,171.5	1,941.41	2.119		
3,125.0	2,718.7	2,770.7	2,770.7	23.5	1,934.4	-40.19	-429.1	5,133.6	4,093.2	2,142.6	1,950.53	2.098		
3,150.0	2,731.3	2,783.3	2,783.3	24.0	1,943.2	-40.88	-429.1	5,133.6	4,073.3	2,113.8	1,959.49	2.079		
3,175.0	2,743.6	2,795.6	2,795.6	24.4	1,951.8	-41.60	-429.1	5,133.6	4,053.3	2,085.0	1,968.29	2.059		
3,200.0	2,755.7	2,807.7	2,807.7	24.9	1,960.2	-42.33	-429.1	5,133.6	4,033.2	2,056.3	1,976.92	2.040		
3,225.0	2,767.5	2,819.5	2,819.5	25.3	1,968.5	-43.08	-429.1	5,133.6	4,013.1	2,027.7	1,985.39	2.021		
3,250.0	2,779.1	2,831.1	2,831.1	25.8	1,976.6	-43.85	-429.1	5,133.6	3,992.8	1,999.1	1,993.69	2.003		
3,275.0	2,790.5	2,842.5	2,842.5	26.3	1,984.5	-44.63	-429.1	5,133.6	3,972.4	1,970.6	2,001.83	1.984	Collision RiskProcedures Req'd	
3,300.0	2,801.6	2,853.6	2,853.6	26.7	1,992.3	-45.44	-429.1	5,133.6	3,952.0	1,942.2	2,009.80	1.966	Collision RiskProcedures Req'd	
3,325.0	2,812.4	2,864.4	2,864.4	27.2	1,999.8	-46.27	-429.1	5,133.6	3,931.4	1,913.8	2,017.60	1.949	Collision RiskProcedures Req'd	
3,343.0	2,820.1	2,872.1	2,872.1	27.6	2,005.2	-46.88	-429.1	5,133.6	3,916.6	1,893.4	2,023.12	1.936	Collision RiskProcedures Req'd	
3,350.0	2,823.1	2,875.1	2,875.1	27.7	2,007.3	-46.93	-429.1	5,133.6	3,910.8	1,885.5	2,025.24	1.931	Collision RiskProcedures Req'd	
3,375.0	2,833.6	2,885.6	2,885.6	28.2	2,014.6	-47.11	-429.1	5,133.6	3,890.1	1,857.3	2,032.84	1.914	Collision RiskProcedures Req'd	
3,400.0	2,844.2	2,896.2	2,896.2	28.7	2,022.0	-47.29	-429.1	5,133.6	3,869.5	1,829.1	2,040.45	1.896	Collision RiskProcedures Req'd	
3,425.0	2,854.8	2,906.8	2,906.8	29.1	2,029.4	-47.48	-429.1	5,133.6	3,848.9	1,800.9	2,048.06	1.879	Collision RiskProcedures Req'd	
3,450.0	2,865.3	2,917.3	2,917.3	29.6	2,036.8	-47.66	-429.1	5,133.6	3,828.4	1,772.7	2,055.67	1.862	Collision RiskProcedures Req'd	
3,475.0	2,875.9	2,927.9	2,927.9	30.1	2,044.1	-47.85	-429.1	5,133.6	3,807.8	1,744.5	2,063.28	1.846	Collision RiskProcedures Req'd	
3,500.0	2,886.5	2,938.5	2,938.5	30.6	2,051.5	-48.04	-429.1	5,133.6	3,787.3	1,716.4	2,070.90	1.829	Collision RiskProcedures Req'd	
3,525.0	2,897.0	2,949.0	2,949.0	31.1	2,058.9	-48.22	-429.1	5,133.6	3,766.8	1,688.3	2,078.52	1.812	Collision RiskProcedures Req'd	
3,550.0	2,907.6	2,959.6	2,959.6	31.6	2,066.3	-48.41	-429.1	5,133.6	3,746.3	1,660.2	2,086.14	1.796	Collision RiskProcedures Req'd	
3,575.0	2,918.2	2,970.2	2,970.2	32.1	2,073.7	-48.61	-429.1	5,133.6	3,725.9	1,632.1	2,093.77	1.780	Collision RiskProcedures Req'd	
3,600.0	2,928.7	2,980.7	2,980.7	32.6	2,081.0	-48.80	-429.1	5,133.6	3,705.5	1,604.1	2,101.40	1.763	Collision RiskProcedures Req'd	
3,625.0	2,939.3	2,991.3	2,991.3	33.1	2,088.4	-48.99	-429.1	5,133.6	3,685.1	1,576.1	2,109.04	1.747	Collision RiskProcedures Req'd	
3,650.0	2,949.8	3,001.8	3,001.8	33.6	2,095.8	-49.19	-429.1	5,133.6	3,664.7	1,548.0	2,116.68	1.731	Collision RiskProcedures Req'd	
3,675.0	2,960.4	3,012.4	3,012.4	34.1	2,103.2	-49.38	-429.1	5,133.6	3,644.4	1,520.1	2,124.32	1.716	Collision RiskProcedures Req'd	
3,678.8	2,962.0	3,014.0	3,014.0	34.1	2,104.3	-49.41	-429.1	5,133.6	3,641.3	1,515.9	2,125.47	1.713	Collision RiskProcedures Req'd, CC, E	

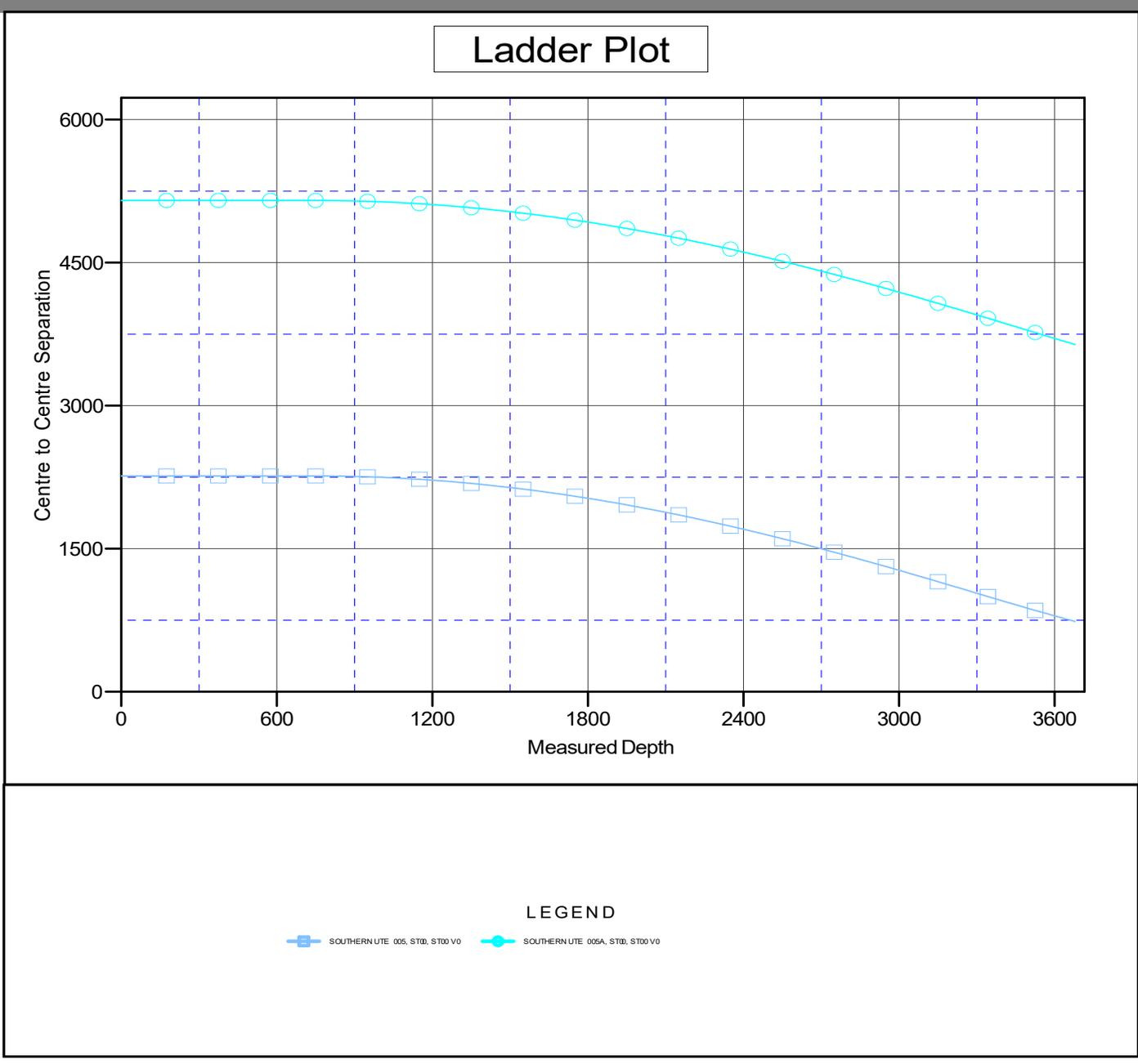
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Pilot Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB to MSL= 6310 @ 6310.0usft	Coordinates are relative to: Southern Ute 705H
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1927 (Exact solution), New Mexico West 30
Central Meridian is 107° 50' 0.000 W	Grid Convergence at Surface is: 0.15°



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

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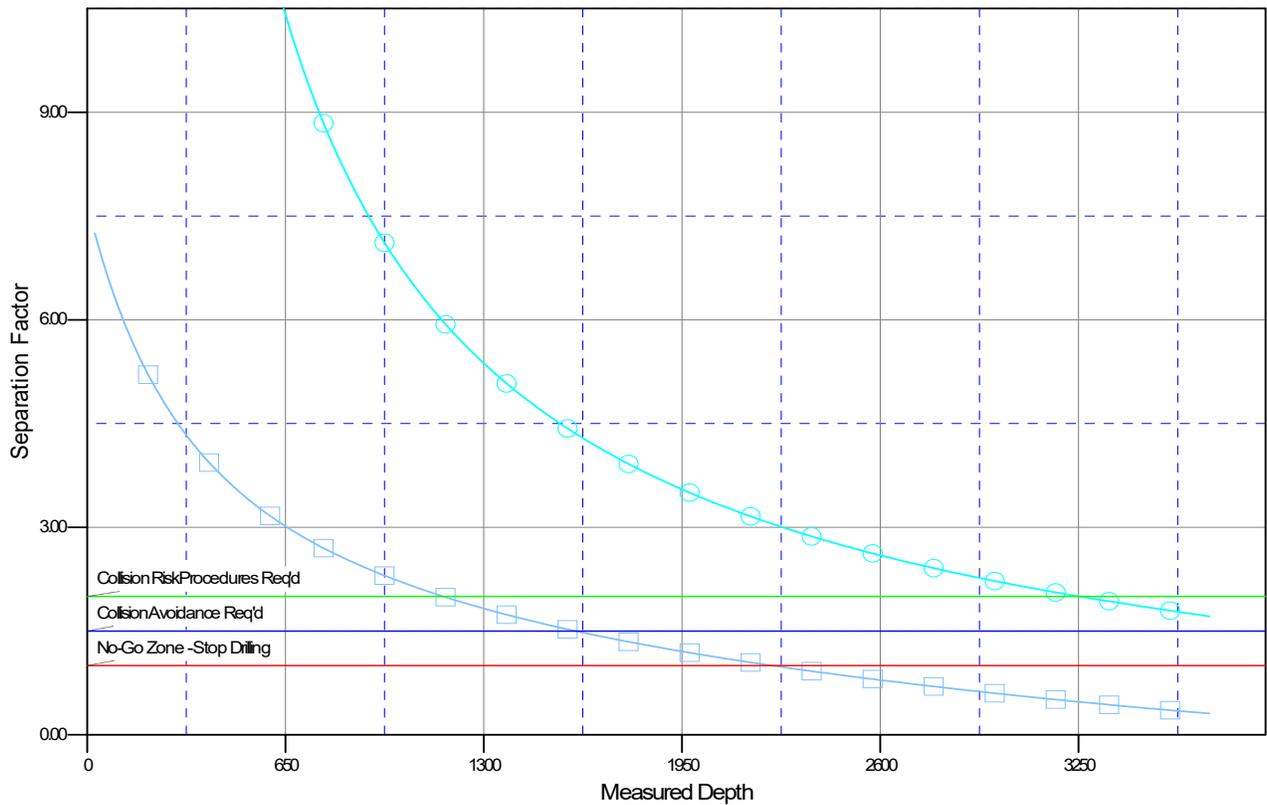
Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 705H
Project:	Farmington, NM	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Pilot Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	WP2.1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB to MSL= 6310 @ 6310.0usft
 Offset Depths are relative to Offset Datum
 Central Meridian is 107° 50' 0.000 W

Coordinates are relative to: Southern Ute 705H
 Coordinate System is US State Plane 1927 (Exact solution), New Mexico West 30
 Grid Convergence at Surface is: 0.15°

Separation Factor Plot



LEGEND

■ SOUTHERN UTE 005, STD, STD V0
 ● SOUTHERN UTE 005A, STD, STD V0

Hilcorp Energy Company

**Farmington, NM
San Juan Basin
Southern Ute 705H**

Pilot Hole

Plan: WP2.1

Standard Planning Report - Geographic

17 February, 2023

Halliburton

Planning Report - Geographic

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Southern Ute 705H
Company:	Hilcorp Energy Company	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Project:	Farmington, NM	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site:	San Juan Basin	North Reference:	Grid
Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot Hole		
Design:	WP2.1		

Project Farmington, NM			
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		Using geodetic scale factor

Site San Juan Basin			
Site Position:		Northing:	2,186,723.60 usft
From:	Map	Easting:	570,736.10 usft
Position Uncertainty:	5.0 usft	Slot Radius:	13.200 in
		Latitude:	37.009
		Longitude:	-107.591

Well Southern Ute 705H			
Well Position	+N/-S	0.0 usft	Northing: 2,192,025.35 usft
	+E/-W	0.0 usft	Easting: 571,642.18 usft
Position Uncertainty		1.0 usft	Wellhead Elevation: usft
Grid Convergence:		0.15 °	Latitude: 37.024
			Longitude: -107.588
			Ground Level: 6,295.0 usft

Wellbore Pilot Hole					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2022	2/8/2023	8.68	63.42	49,552.26589503

Design WP2.1				
Audit Notes:				
Version:		Phase:	PLAN	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	113.00

Plan Survey Tool Program		Date 2/17/2023
Depth From (usft)	Depth To (usft)	Survey (Wellbore)
1	0.0	3,678.8 WP2.1 (Pilot Hole)
		Tool Name 3_MWD+HRGM
		B001Mb: HRGM declination cc
		Remarks

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
743.0	0.00	0.00	743.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,343.0	65.00	113.00	2,820.1	-517.0	1,218.1	2.50	2.50	0.00	113.00	
3,678.8	65.00	113.00	2,962.0	-635.9	1,498.2	0.00	0.00	0.00	0.00	

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Planning Report - Geographic

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Southern Ute 705H
Company:	Hilcorp Energy Company	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Project:	Farmington, NM	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site:	San Juan Basin	North Reference:	Grid
Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot Hole		
Design:	WP2.1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.0	0.00	0.00	0.0	0.0	0.0	2,192,025.35	571,642.18	37.024	-107.588	
100.0	0.00	0.00	100.0	0.0	0.0	2,192,025.35	571,642.18	37.024	-107.588	
200.0	0.00	0.00	200.0	0.0	0.0	2,192,025.35	571,642.18	37.024	-107.588	
300.0	0.00	0.00	300.0	0.0	0.0	2,192,025.35	571,642.18	37.024	-107.588	
400.0	0.00	0.00	400.0	0.0	0.0	2,192,025.35	571,642.18	37.024	-107.588	
500.0	0.00	0.00	500.0	0.0	0.0	2,192,025.35	571,642.18	37.024	-107.588	
600.0	0.00	0.00	600.0	0.0	0.0	2,192,025.35	571,642.18	37.024	-107.588	
700.0	0.00	0.00	700.0	0.0	0.0	2,192,025.35	571,642.18	37.024	-107.588	
743.0	0.00	0.00	743.0	0.0	0.0	2,192,025.35	571,642.18	37.024	-107.588	
800.0	1.43	113.00	800.0	-0.3	0.7	2,192,025.07	571,642.84	37.024	-107.588	
900.0	3.93	113.00	899.9	-2.1	4.9	2,192,023.25	571,647.13	37.024	-107.588	
1,000.0	6.43	113.00	999.5	-5.6	13.3	2,192,019.73	571,655.43	37.024	-107.588	
1,100.0	8.93	113.00	1,098.6	-10.8	25.5	2,192,014.51	571,667.72	37.024	-107.588	
1,200.0	11.43	113.00	1,197.0	-17.7	41.8	2,192,007.61	571,683.98	37.024	-107.588	
1,300.0	13.93	113.00	1,294.5	-26.3	62.0	2,191,999.03	571,704.18	37.024	-107.588	
1,400.0	16.43	113.00	1,391.0	-36.5	86.1	2,191,988.81	571,728.27	37.024	-107.588	
1,500.0	18.93	113.00	1,486.3	-48.4	114.0	2,191,976.95	571,756.21	37.024	-107.588	
1,600.0	21.43	113.00	1,580.2	-61.9	145.8	2,191,963.47	571,787.96	37.024	-107.587	
1,700.0	23.93	113.00	1,672.4	-76.9	181.3	2,191,948.41	571,823.44	37.024	-107.587	
1,800.0	26.43	113.00	1,762.9	-93.6	220.4	2,191,931.79	571,862.59	37.024	-107.587	
1,900.0	28.93	113.00	1,851.5	-111.7	263.2	2,191,913.65	571,905.33	37.023	-107.587	
2,000.0	31.43	113.00	1,937.9	-131.3	309.4	2,191,894.01	571,951.59	37.023	-107.587	
2,100.0	33.93	113.00	2,022.1	-152.4	359.1	2,191,872.92	572,001.28	37.023	-107.587	
2,200.0	36.43	113.00	2,103.8	-174.9	412.2	2,191,850.41	572,054.30	37.023	-107.587	
2,300.0	38.93	113.00	2,183.0	-198.8	468.4	2,191,826.54	572,110.55	37.023	-107.586	
2,400.0	41.43	113.00	2,259.4	-224.0	527.8	2,191,801.33	572,169.93	37.023	-107.586	
2,500.0	43.93	113.00	2,332.9	-250.5	590.2	2,191,774.85	572,232.31	37.023	-107.586	
2,600.0	46.43	113.00	2,403.4	-278.2	655.5	2,191,747.14	572,297.59	37.023	-107.586	
2,700.0	48.93	113.00	2,470.7	-307.1	723.5	2,191,718.26	572,365.64	37.023	-107.585	
2,800.0	51.43	113.00	2,534.7	-337.1	794.2	2,191,688.26	572,436.32	37.023	-107.585	
2,900.0	53.93	113.00	2,595.4	-368.2	867.4	2,191,657.19	572,509.51	37.023	-107.585	
3,000.0	56.43	113.00	2,652.5	-400.3	943.0	2,191,625.12	572,585.06	37.023	-107.585	
3,100.0	58.93	113.00	2,705.9	-433.3	1,020.7	2,191,592.11	572,662.83	37.023	-107.584	
3,200.0	61.43	113.00	2,755.7	-467.2	1,100.6	2,191,558.22	572,742.68	37.023	-107.584	
3,300.0	63.93	113.00	2,801.6	-501.9	1,182.4	2,191,523.51	572,824.45	37.022	-107.584	
3,343.0	65.00	113.00	2,820.1	-517.0	1,218.1	2,191,508.35	572,860.16	37.022	-107.584	
3,400.0	65.00	113.00	2,844.2	-537.2	1,265.6	2,191,488.17	572,907.71	37.022	-107.584	
3,500.0	65.00	113.00	2,886.5	-572.6	1,349.0	2,191,452.76	572,991.13	37.022	-107.583	
3,600.0	65.00	113.00	2,928.7	-608.0	1,432.5	2,191,417.35	573,074.55	37.022	-107.583	
3,678.8	65.00	113.00	2,962.0	-635.9	1,498.2	2,191,389.46	573,140.24	37.022	-107.583	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
TD (705H Lat.No.2)	0.00	0.00	2,850.0	-568.1	5,078.2	2,191,457.30	576,720.00	37.022	-107.571	
- plan misses target center by 3582.4usft at 3678.8usft MD (2962.0 TVD, -635.9 N, 1498.2 E)										
- Point										
Potential Pt.1 (705H Lat.	0.00	0.00	2,891.0	-925.6	1,868.2	2,191,099.80	573,510.20	37.021	-107.582	
- plan misses target center by 475.2usft at 3678.8usft MD (2962.0 TVD, -635.9 N, 1498.2 E)										
- Point										

Halliburton

Planning Report - Geographic

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Southern Ute 705H
Company:	Hilcorp Energy Company	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Project:	Farmington, NM	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site:	San Juan Basin	North Reference:	Grid
Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot Hole		
Design:	WP2.1		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
743.0	743.0	0.0	0.0	KOP @ 743' MD, 2.5°/100' DLS	
3,343.0	2,820.1	-517.0	1,218.1	EOB & SOH @ 3343' MD, 65° INC	
3,678.8	2,962.0	-635.9	1,498.2	PBHL @ 3678.8' MD	

Project: Farmington, NM
 Site: San Juan Basin
 Well: Southern Ute 705H
 Wellbore: Pilot Hole
 Design: WP2.1

17:26, February 17 2023

WP2.1										
Surface Location:										
		Northing	Easting		Latitude	Longitude				
		2192025.35	571642.18		37.024	-107.588				
		Reference Elev'n:			RKB to MSL= 6310 @ 6310.0usft					
Sec	MD	Inc	i	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
1	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.0	
2	743.0	0.00	0.00	743.0	0.0	0.0	0.00	0.00	0.0	KOP @ 743' MD, 2.5°/100' DLS
3	3343.0	65.00	113.00	2820.1	-517.0	1218.1	2.50	113.00	1323.3	EOB & SOH @ 3343' MD, 65° INC
4	3678.8	65.00	113.00	2962.0	-635.9	1498.2	0.00	0.00	1627.6	PBHL @ 3678.8' MD

PROJECT DETAILS: Farmington, NM

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

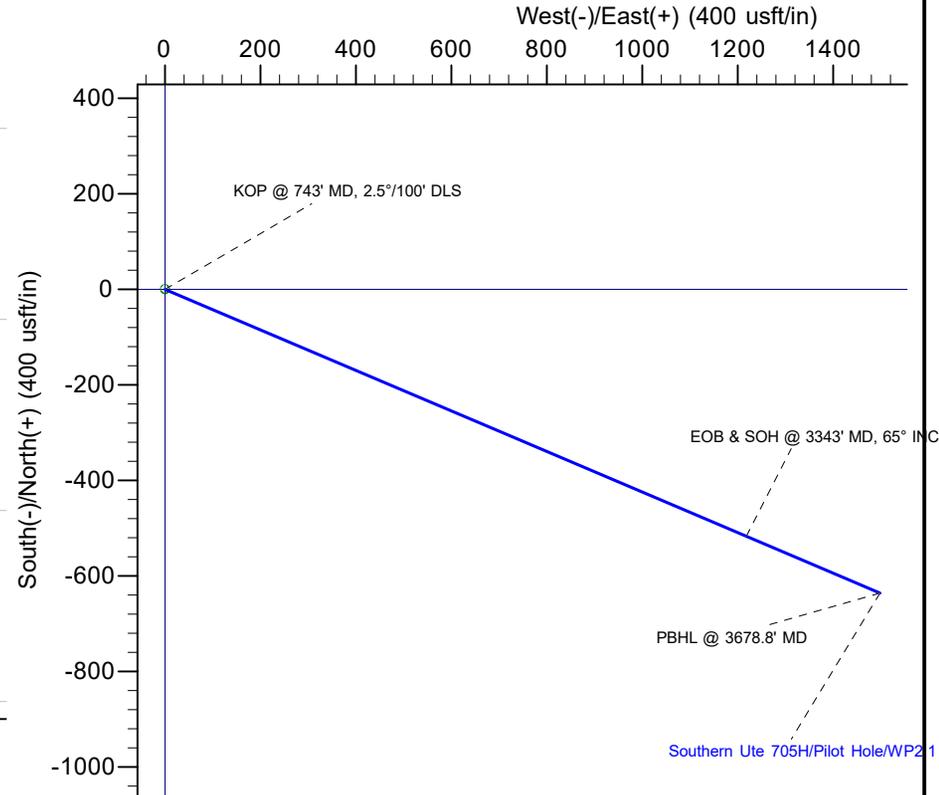
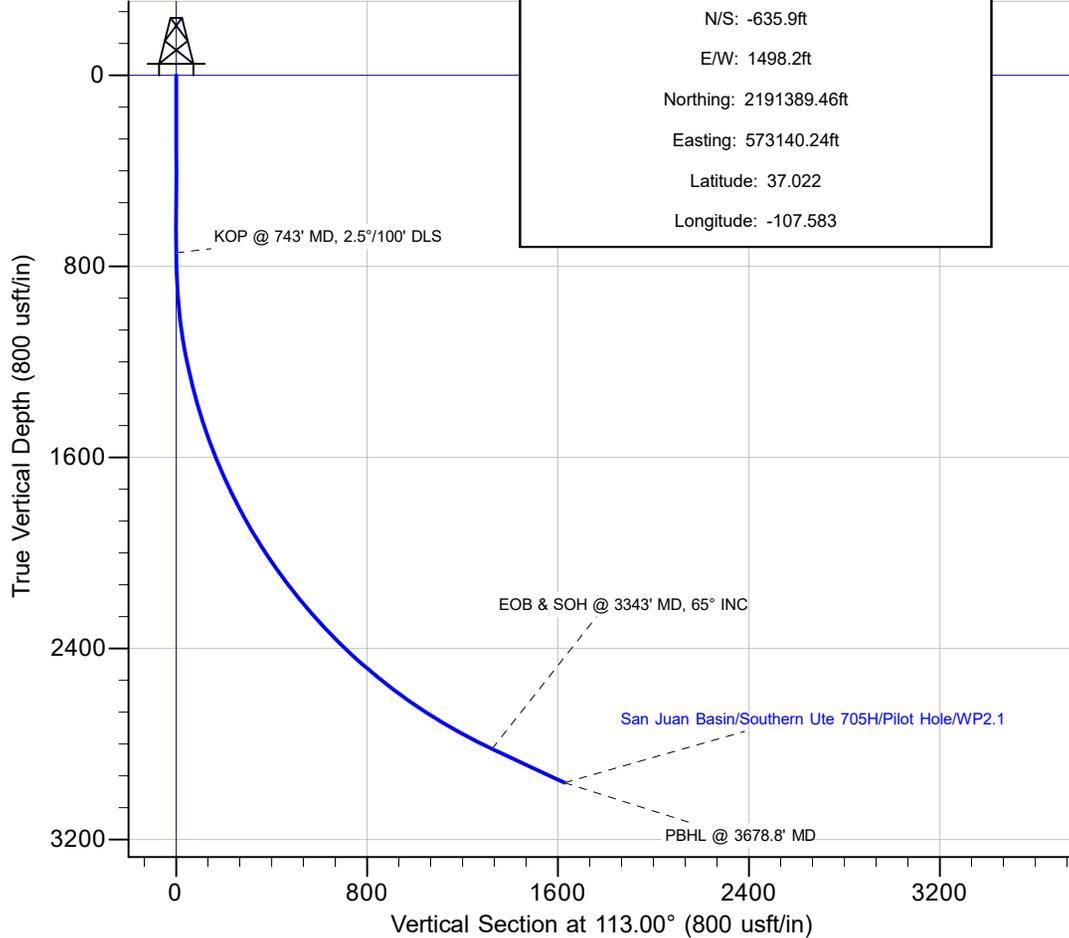
BHL DETAILS

MD: 3678.8ft
 TVD: 2962.0ft
 N/S: -635.9ft
 E/W: 1498.2ft

Northing: 2191389.46ft
 Easting: 573140.24ft
 Latitude: 37.022
 Longitude: -107.583



Reference is Grid North



Hilcorp Energy Company

**Farmington, NM
San Juan Basin
Southern Ute 705H**

Pilot Hole

Plan: WP2.1

Standard Planning Report

17 February, 2023

Halliburton

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Southern Ute 705H
Company:	Hilcorp Energy Company	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Project:	Farmington, NM	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site:	San Juan Basin	North Reference:	Grid
Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot Hole		
Design:	WP2.1		

Project	Farmington, NM		
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		Using geodetic scale factor

Site	San Juan Basin				
Site Position:		Northing:	2,186,723.60 usft	Latitude:	37.009
From:	Map	Easting:	570,736.10 usft	Longitude:	-107.591
Position Uncertainty:	5.0 usft	Slot Radius:	13.200 in		

Well	Southern Ute 705H					
Well Position	+N/-S	0.0 usft	Northing:	2,192,025.35 usft	Latitude:	37.024
	+E/-W	0.0 usft	Easting:	571,642.18 usft	Longitude:	-107.588
Position Uncertainty		1.0 usft	Wellhead Elevation:	usft	Ground Level:	6,295.0 usft
Grid Convergence:		0.15 °				

Wellbore	Pilot Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2022	2/8/2023	8.68	63.42	49,552.26589503

Design	WP2.1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	113.00

Plan Survey Tool Program	Date	2/17/2023		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	3,678.8 WP2.1 (Pilot Hole)	3_MWD+HRGM	B001Mb: HRGM declination co

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
743.0	0.00	0.00	743.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,343.0	65.00	113.00	2,820.1	-517.0	1,218.1	2.50	2.50	0.00	113.00	
3,678.8	65.00	113.00	2,962.0	-635.9	1,498.2	0.00	0.00	0.00	0.00	

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Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Southern Ute 705H
Company:	Hilcorp Energy Company	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Project:	Farmington, NM	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site:	San Juan Basin	North Reference:	Grid
Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot Hole		
Design:	WP2.1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
743.0	0.00	0.00	743.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	1.43	113.00	800.0	-0.3	0.7	0.7	2.50	2.50	0.00
900.0	3.93	113.00	899.9	-2.1	4.9	5.4	2.50	2.50	0.00
1,000.0	6.43	113.00	999.5	-5.6	13.3	14.4	2.50	2.50	0.00
1,100.0	8.93	113.00	1,098.6	-10.8	25.5	27.7	2.50	2.50	0.00
1,200.0	11.43	113.00	1,197.0	-17.7	41.8	45.4	2.50	2.50	0.00
1,300.0	13.93	113.00	1,294.5	-26.3	62.0	67.4	2.50	2.50	0.00
1,400.0	16.43	113.00	1,391.0	-36.5	86.1	93.5	2.50	2.50	0.00
1,500.0	18.93	113.00	1,486.3	-48.4	114.0	123.9	2.50	2.50	0.00
1,600.0	21.43	113.00	1,580.2	-61.9	145.8	158.4	2.50	2.50	0.00
1,700.0	23.93	113.00	1,672.4	-76.9	181.3	196.9	2.50	2.50	0.00
1,800.0	26.43	113.00	1,762.9	-93.6	220.4	239.5	2.50	2.50	0.00
1,900.0	28.93	113.00	1,851.5	-111.7	263.2	285.9	2.50	2.50	0.00
2,000.0	31.43	113.00	1,937.9	-131.3	309.4	336.2	2.50	2.50	0.00
2,100.0	33.93	113.00	2,022.1	-152.4	359.1	390.1	2.50	2.50	0.00
2,200.0	36.43	113.00	2,103.8	-174.9	412.2	447.7	2.50	2.50	0.00
2,300.0	38.93	113.00	2,183.0	-198.8	468.4	508.9	2.50	2.50	0.00
2,400.0	41.43	113.00	2,259.4	-224.0	527.8	573.4	2.50	2.50	0.00
2,500.0	43.93	113.00	2,332.9	-250.5	590.2	641.1	2.50	2.50	0.00
2,600.0	46.43	113.00	2,403.4	-278.2	655.5	712.1	2.50	2.50	0.00
2,700.0	48.93	113.00	2,470.7	-307.1	723.5	786.0	2.50	2.50	0.00
2,800.0	51.43	113.00	2,534.7	-337.1	794.2	862.8	2.50	2.50	0.00
2,900.0	53.93	113.00	2,595.4	-368.2	867.4	942.3	2.50	2.50	0.00
3,000.0	56.43	113.00	2,652.5	-400.3	943.0	1,024.4	2.50	2.50	0.00
3,100.0	58.93	113.00	2,705.9	-433.3	1,020.7	1,108.9	2.50	2.50	0.00
3,200.0	61.43	113.00	2,755.7	-467.2	1,100.6	1,195.6	2.50	2.50	0.00
3,300.0	63.93	113.00	2,801.6	-501.9	1,182.4	1,284.5	2.50	2.50	0.00
3,343.0	65.00	113.00	2,820.1	-517.0	1,218.1	1,323.3	2.50	2.50	0.00
3,400.0	65.00	113.00	2,844.2	-537.2	1,265.6	1,374.9	0.00	0.00	0.00
3,500.0	65.00	113.00	2,886.5	-572.6	1,349.0	1,465.6	0.00	0.00	0.00
3,600.0	65.00	113.00	2,928.7	-608.0	1,432.5	1,556.2	0.00	0.00	0.00
3,678.8	65.00	113.00	2,962.0	-635.9	1,498.2	1,627.6	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
TD (705H Lat.No.2)	0.00	0.00	2,850.0	-568.1	5,078.2	2,191,457.30	576,720.00	37.022	-107.571
- hit/miss target									
- plan misses target center by 3582.4usft at 3678.8usft MD (2962.0 TVD, -635.9 N, 1498.2 E)									
- Point									
Potential Pt.1 (705H Lat.	0.00	0.00	2,891.0	-925.6	1,868.2	2,191,099.80	573,510.20	37.021	-107.582
- plan misses target center by 475.2usft at 3678.8usft MD (2962.0 TVD, -635.9 N, 1498.2 E)									
- Point									

Halliburton

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Southern Ute 705H
Company:	Hilcorp Energy Company	TVD Reference:	RKB to MSL= 6310 @ 6310.0usft
Project:	Farmington, NM	MD Reference:	RKB to MSL= 6310 @ 6310.0usft
Site:	San Juan Basin	North Reference:	Grid
Well:	Southern Ute 705H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot Hole		
Design:	WP2.1		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
743.0	743.0	0.0	0.0	KOP @ 743' MD, 2.5°/100' DLS	
3,343.0	2,820.1	-517.0	1,218.1	EOB & SOH @ 3343' MD, 65° INC	
3,678.8	2,962.0	-635.9	1,498.2	PBHL @ 3678.8' MD	



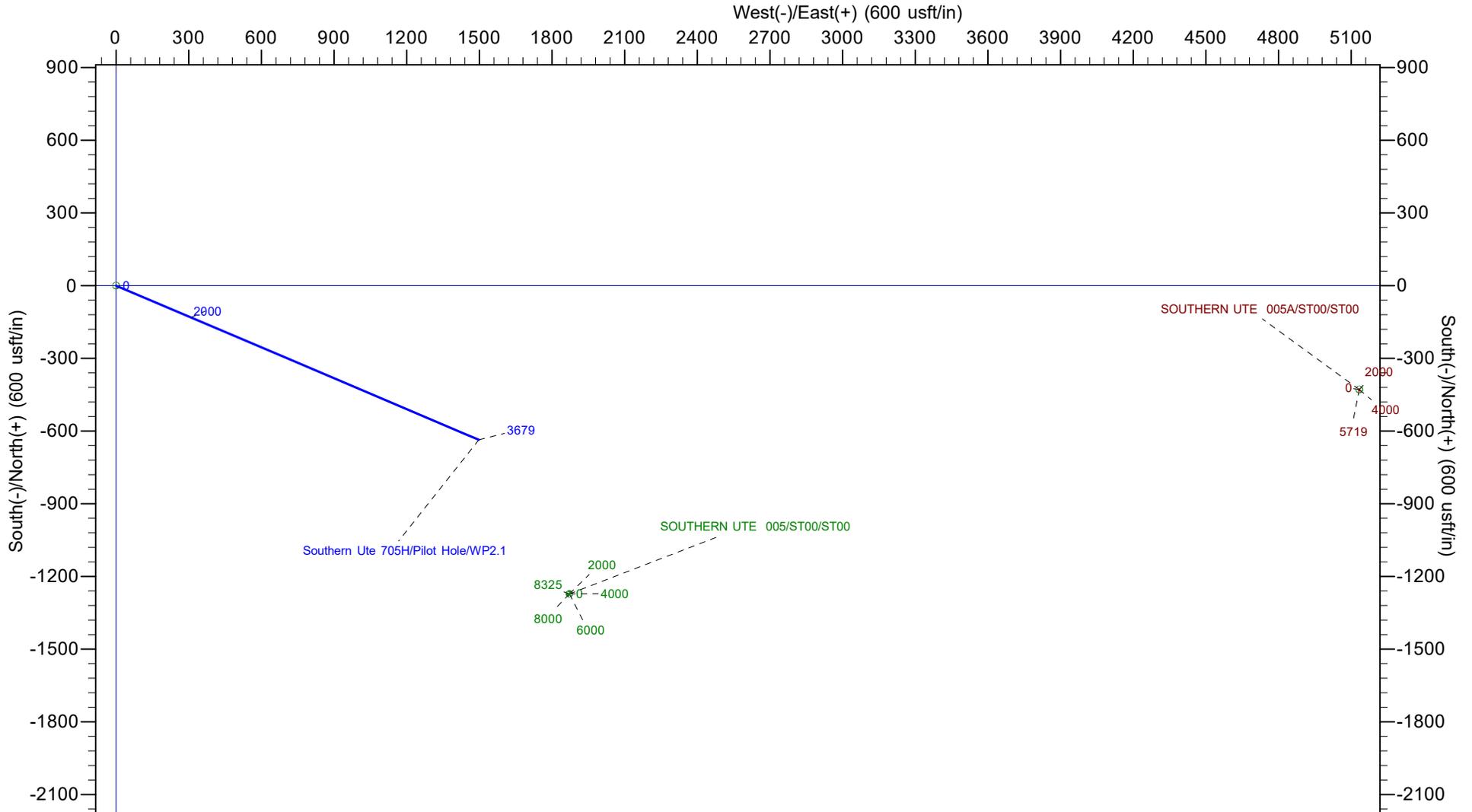
Project: Farmington, NM
Site: San Juan Basin
Well: Southern Ute 705H
Wellbore: Pilot Hole
Design: WP2.1



Reference is Grid North

PROJECT DETAILS: Farmington, NM
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

11:24, March 15 2023

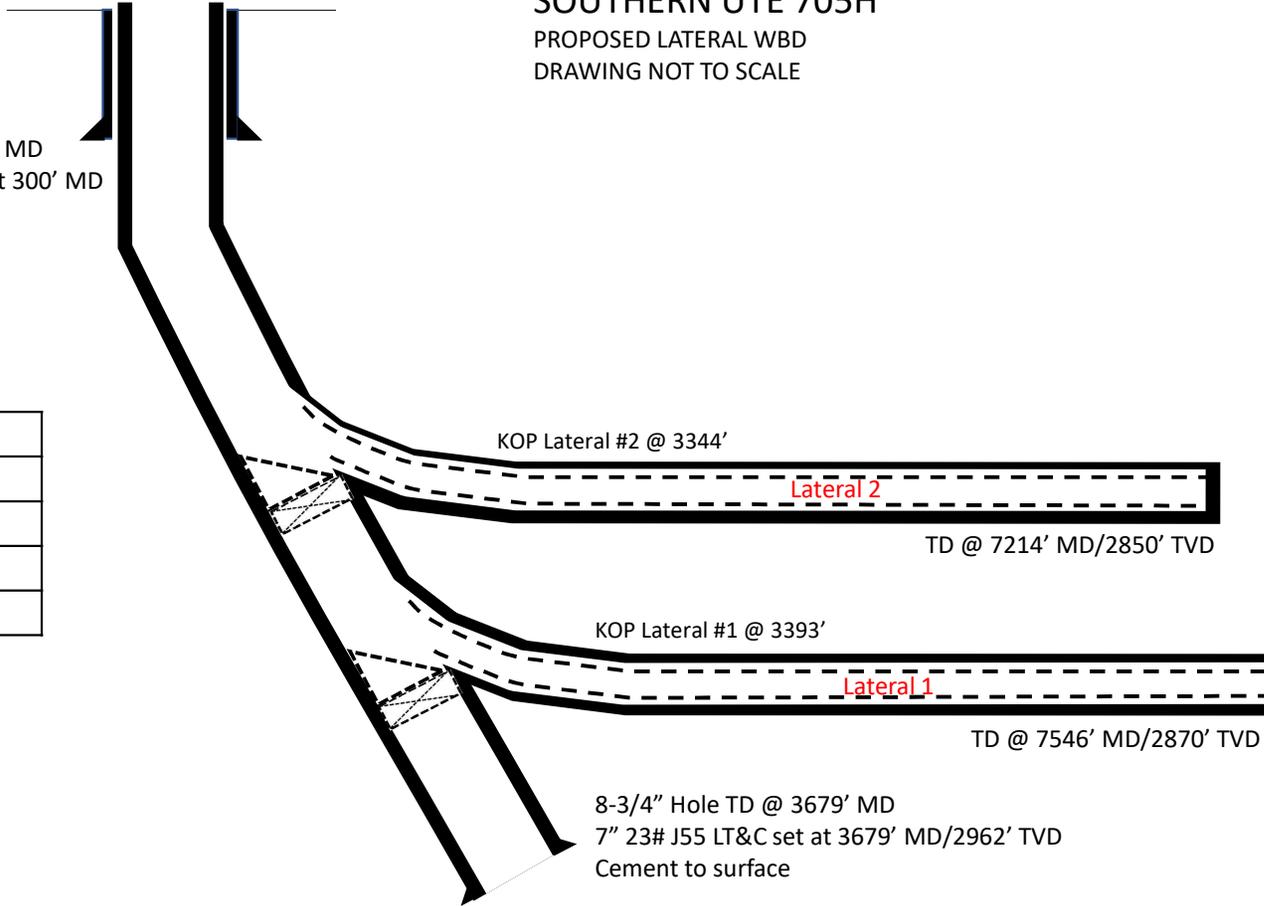


SOUTHERN UTE 705H

PROPOSED LATERAL WBD
DRAWING NOT TO SCALE

State: CO
County: La Plata
API:
GL: 6295'
KB: 15'

12-1/4" Surface Hole to 300' MD
9-5/8" 32.3# H40 ST&C set at 300' MD
Cement to surface



All Laterals:
6-1/4" Hole
4-1/2" 11.6# J55 LT&C casing
Pre-Perforated Drop-off liner

Formation	MD	TVD
OJO	2472'	2312'
KIRTLAND	2669'	2450'
FRUITLAND	2799'	2534'
PC (EST)	3725'	2982'

8-3/4" Hole TD @ 3679' MD
7" 23# J55 LT&C set at 3679' MD/2962' TVD
Cement to surface

Bore Name	Window Top	Window Bot	Bridge Plug	KOP Method	KOP (MD)	KOP (TVD)	Top of Production T-32-N R-7-W	Top of KOP T-32-N R-7-W	Total Depth MD	Total Depth TVD	Liner Bot	Liner Top	Proposed BHL T-32-N R-7-W
Pilot	N/A	N/A	N/A	Motor	743	743	196' FNL & 477' FEL (15)	196' FNL & 477' FEL (15)	3679	2962	N/A	N/A	840' FNL & 1025' FEL (14)
Lateral 1	3383	3393	3393	Whipstock	3393	2841	738' FNL & 786' FWL (14)	738' FNL & 786' FWL (14)	7546	2870	7546	3397	1922' FNL & 716' FEL (14)
Lateral 2	3334	3344	3344	Whipstock	3344	2821	721' FNL & 745' FWL (14)	721' FNL & 745' FWL (14)	7214	2850	7214	3348	798' FNL & 721' FEL (14)

C. Proposed Cement Program:

Proposed Cement Design							
Interval	Depth (ft. MD)	Lead/Tail	Volume (ft ³)	Sacks	Slurry	Density	Planned TOC
Surface	300'	Lead	188 ft ³	151	Type III Cement 0.25% FL-52, 0.25 pps celloflake 1.25 ft ³ /sk – 5.75 gal/sk	15.2 ppg	Surface
Intermediate	3,679'	Lead	717 ft ³	337	Premium Lite 3% CaCl, 0.25 pps celloflake, 5 ppm LCM-1, 0.4% FL-52, 8% bentonite, 0.4% SMS 2.13 ft ³ /sk – 11.29 gal/sk	12.1 ppg	Surface
		Tail	90 ft ³	65	Type III Cement 1% CaCl, 0.25 pps celloflake, 0.2% FL-52 1.38ft ³ /sk – 6.64 gal/sk	14.6 ppg	3,179'
Production Lateral #1	7,546'	N/A	N/A	N/A	N/A – Uncemented pre-perforated liner.	N/A	N/A
Production Lateral #2	7,214'	N/A	N/A	N/A	N/A – Uncemented pre-perforated liner.	N/A	N/A

Notes:

- The cement slurry additives may be adjusted to accommodate required pump and compressive test times.
- For the intermediate hole section, a 2-stage cement job may be performed if hole conditions dictate. If needed, the stage tool will be placed at an approximate depth near the top of the Fruitland Coal (2,534' TVD)
- Cement will be circulated to surface on surface and intermediate casing sections to protect water bearing zones.
- A minimum of 8 hours of wait on cement time will be observed on each hole section to allow adequate time for cement to achieve a minimum of 500 psi of compressive strength. The BOP will not be nipped down, the wellhead will not be installed, the casing will not be tested and the prior casing shoe will not be drilled out until adequate wait on cement time has been observed (8 hours or time to reach 500 psi compressive strength).

7. Testing, Logging, Coring

A. Mud Logging

- Mud loggers will collect formation samples every 30' from the surface casing shoe to both the TD of the pilot hole and TD of the production laterals.

B. MWD

- Measurement while drilling tools will be utilized from the surface casing shoe to both the TD of the pilot hole and TD of the production laterals to measure and record inclination and azimuth.

C. LWD

- Logging while drilling tools (gamma ray) will be utilized in the intermediate section from the surface casing shoe to the pilot hole section TD.
- Logging while drilling tools (gamma ray) will be utilized while drilling the production laterals from the intermediate casing kick-offs to the production laterals' TD to assist in staying in the desired coal seam while drilling the lateral sections.

D. Open Hole Logging

- There are no planned open hole logs post drilling.

E. Coring

- There is no coring or formation testing planned.

F. Cased Hole Logging

- The 7" intermediate casing will be cemented to surface to protect water bearing zones. If cement is not circulated to surface on the intermediate cement job, a temperature survey or a cement bod log will be run to verify top of cement.

8. Directional Drilling Plan

- The directional drilling plans and plots are attached.
- The directional plan is built from geologic targets from offset wells and lease boundaries. The production laterals will be landed and drilled horizontally within the target formation utilizing LWD tools to steer the wellbores. On-site adjustments to the directional plans will be made as formation and wellbore dictate.

APD ID: 10400092029

Submission Date: 05/03/2023

Highlighted data reflects the most recent changes

Operator Name: HILCORP ENERGY COMPANY

Well Name: SOUTHERN UTE

Well Number: 705H

[Show Final Text](#)

Well Type: COALBED NATURAL GAS WELL

Well Work Type: Drill

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

SHEET_B1_20230503131146.pdf

Existing Road Purpose: ACCESS

Row(s) Exist? NO

ROW ID(s)

ID:

Do the existing roads need to be improved? YES

Existing Road Improvement Description: A total of 6786 of existing roadway will be upgraded by adding 3 minus road base after twelve new culverts are installed at the locations indicated on Sheet J

Existing Road Improvement Attachment:

SHEET_J_20230503131159.pdf

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

SHEET_B3_20230503131232.pdf

New road type: RESOURCE

Length: 79 Feet

Width (ft.): 30

Max slope (%): 8

Max grade (%): 8

Army Corp of Engineers (ACOE) permit required? N

ACOE Permit Number(s):

New road travel width: 14

New road access erosion control: crowning and capping

New road access plan or profile prepared? Y

New road access plan

Operator Name: HILCORP ENERGY COMPANY

Well Name: SOUTHERN UTE

Well Number: 705H

SHEET_B2_20230503131416.pdf

Access road engineering design? N

Access road engineering design

Turnout? N

Access surfacing type: GRAVEL

Access topsoil source: ONSITE

Access surfacing type description:

Access onsite topsoil source depth: 6

Offsite topsoil source description:

Onsite topsoil removal process: Dozer

Access other construction information:

Access miscellaneous information:

Number of access turnouts:

Access turnout map:

Drainage Control

New road drainage crossing: CULVERT

Drainage Control comments: There will be one 24 x 30 culverts and one cattleguard on the new access road

Road Drainage Control Structures (DCS) description: crowning and capping

Road Drainage Control Structures (DCS) attachment:

Appendix_B_20230503131338.pdf

Access Additional Attachments

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

SHEET_D2_20230503131519.pdf

SHEET_D1_20230503131519.pdf

Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan? DEFER

Estimated Production Facilities description: . The typical well producing into this formation has the following production facilities. i. Two 80 BBL Produced Water Tanks ii. Separator iii. Production pit iv. Pumping unit v. Meter House vi. Compressor

Operator Name: HILCORP ENERGY COMPANY

Well Name: SOUTHERN UTE

Well Number: 705H

Section 5 - Location and Types of Water Supply

Water Source Table

Water source type: FRESH WATER LAKE

Water source use type: DUST CONTROL
INTERMEDIATE/PRODUCTION
CASING

Source latitude: **Source longitude:**

Source datum:

Water source permit type: OTHER

Water source transport method: TRUCKING

Source land ownership: OTHER **Describe land ownership:** Private

Source transportation land ownership: PRIVATE

Water source volume (barrels): 2000

Source volume (acre-feet): 0.25778619

Source volume (gal): 84000

Water source and transportation

SHEET_H_20230503131616.pdf

Water source comments:

New water well? N

New Water Well Info

Well latitude: **Well Longitude:** **Well datum:**

Well target aquifer:

Est. depth to top of aquifer(ft): **Est thickness of aquifer:**

Aquifer comments:

Aquifer documentation:

Well depth (ft):

Well casing type:

Well casing outside diameter (in.):

Well casing inside diameter (in.):

New water well casing?

Used casing source:

Drilling method:

Drill material:

Grout material:

Grout depth:

Casing length (ft.):

Casing top depth (ft.):

Operator Name: HILCORP ENERGY COMPANY

Well Name: SOUTHERN UTE

Well Number: 705H

Well Production type:

Completion Method:

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Using any construction materials: YES

Construction Materials description: Construction material will be obtained from the location site

Construction Materials source location

SHEET_G2_20230503131645.pdf

SHEET_G1_20230503131645.pdf

Section 7 - Methods for Handling

Waste type: DRILLING

Waste content description: Formation cuttings

Amount of waste: 696 barrels

Waste disposal frequency : Daily

Safe containment description: Roll-off bins

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** OTHER

Disposal type description:

Disposal location description: Bondad Landfill, Envirotech Land Farm

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit? NO

Reserve pit length (ft.) **Reserve pit width (ft.)**

Reserve pit depth (ft.) **Reserve pit volume (cu. yd.)**

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Operator Name: HILCORP ENERGY COMPANY

Well Name: SOUTHERN UTE

Well Number: 705H

Are you storing cuttings on location? N

Description of cuttings location

Cuttings area length (ft.)

Cuttings area width (ft.)

Cuttings area depth (ft.)

Cuttings area volume (cu. yd.)

Is at least 50% of the cuttings area in cut?

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary

Are you requesting any Ancillary Facilities?: N

Ancillary Facilities

Comments:

Section 9 - Well Site

Well Site Layout Diagram:

SHEET_G3_20230503131830.pdf

Comments:

Section 10 - Plans for Surface

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name: SOUTHERN UTE

Multiple Well Pad Number: 705H

Recontouring

Appendix_A_20230503131912.pdf

Drainage/Erosion control construction: Hilcorp will use appropriate erosion control/water management design features within the proposed project area. Hilcorp will use straw wattles as appropriate to limit erosion and sediment transport from any stockpiled soils. Culverts will be placed along the proposed access road for the proper drainage of potential stormwater run-off through the project area. A completed stormwater management plan is on file with the SUIT Department of Natural Resources, Water Resources Division.

Drainage/Erosion control reclamation: Hilcorp will use appropriate erosion control/water management design features within the proposed project area. Hilcorp will use straw wattles as appropriate to limit erosion and sediment transport from any stockpiled soils. Culverts will be placed along the proposed access road for the proper drainage of potential stormwater run-off through the project area. A completed stormwater management plan is on file with the SUIT Department of Natural Resources, Water Resources Division.

Operator Name: HILCORP ENERGY COMPANY

Well Name: SOUTHERN UTE

Well Number: 705H

Well pad proposed disturbance (acres): 2.05	Well pad interim reclamation (acres): 0.45	Well pad long term disturbance (acres): 1.6
Road proposed disturbance (acres): 0.036	Road interim reclamation (acres): 0	Road long term disturbance (acres): 0
Powerline proposed disturbance (acres): 0	Powerline interim reclamation (acres): 0	Powerline long term disturbance (acres): 0
Pipeline proposed disturbance (acres): 0	Pipeline interim reclamation (acres): 0	Pipeline long term disturbance (acres): 0
Other proposed disturbance (acres): 0	Other interim reclamation (acres): 0	Other long term disturbance (acres): 0
Total proposed disturbance: 2.086	Total interim reclamation: 0.45	Total long term disturbance: 1.6

Disturbance Comments:

Reconstruction method: See attached Appendix A

Topsoil redistribution: See attached Appendix A

Soil treatment: See attached Appendix A

Existing Vegetation at the well pad: See attached Appendix A

Existing Vegetation at the well pad

Existing Vegetation Community at the road: See attached Appendix A

Existing Vegetation Community at the road

Existing Vegetation Community at the pipeline: See attached Appendix A

Existing Vegetation Community at the pipeline

Existing Vegetation Community at other disturbances: See attached Appendix A

Existing Vegetation Community at other disturbances

Non native seed used? N

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? N

Seedling transplant description

Will seed be harvested for use in site reclamation? N

Seed harvest description:

Seed harvest description attachment:

Operator Name: HILCORP ENERGY COMPANY

Well Name: SOUTHERN UTE

Well Number: 705H

Seed

Seed Table

Seed Summary

Total pounds/Acre:

Seed Type

Pounds/Acre

Seed reclamation

Operator Contact/Responsible Official

First Name:

Last Name:

Phone:

Email:

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? N

Existing invasive species treatment description:

Existing invasive species treatment

Weed treatment plan description: See attached Appendix A

Weed treatment plan

Monitoring plan description: See attached Appendix A

Monitoring plan

Success standards: See attached Appendix A

Pit closure description: No pit

Pit closure attachment:

Section 11 - Surface

Disturbance type: WELL PAD

Describe:

Surface Owner: PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

BOR Local Office:

Operator Name: HILCORP ENERGY COMPANY

Well Name: SOUTHERN UTE

Well Number: 705H

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland:

USFS Ranger District:

Surface use plan certification: YES

Surface use plan certification document:

BLM_Access_Agreement__CK_20230726064534.pdf

BLM_Access_Agreement__KS_20230726064534.pdf

BLM_Access_Agreement__RA_20230726064533.pdf

Surface access agreement or bond: AGREEMENT

Surface Access Agreement Need description: Mary Austin Estate

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Disturbance type: NEW ACCESS ROAD

Describe:

Surface Owner: PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

Operator Name: HILCORP ENERGY COMPANY

Well Name: SOUTHERN UTE

Well Number: 705H

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland:

USFS Ranger District:

Surface use plan certification: YES

Surface use plan certification document:

BLM_Access_Agreement__CK_20230726064609.pdf

BLM_Access_Agreement__KS_20230726064609.pdf

BLM_Access_Agreement__RA_20230726064609.pdf

Surface access agreement or bond: AGREEMENT

Surface Access Agreement Need description: Mary Austin Estate

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Section 12 - Other

Right of Way needed? Y

Use APD as ROW? Y

ROW Type(s): 281001 ROW - ROADS,288100 ROW – O&G Pipeline,288101 ROW – O&G Facility Sites

ROW

SUPO Additional Information:

Use a previously conducted onsite? N

Previous Onsite information:

Operator Name: HILCORP ENERGY COMPANY

Well Name: SOUTHERN UTE

Well Number: 705H

Other SUPO

SHEET_I_20230503132316.pdf

SHEET_F_20230503132316.pdf

Southern_Ute_705H_SUPO__No_Attachments_20230503132316.pdf

SHEET_E_20230503132316.pdf

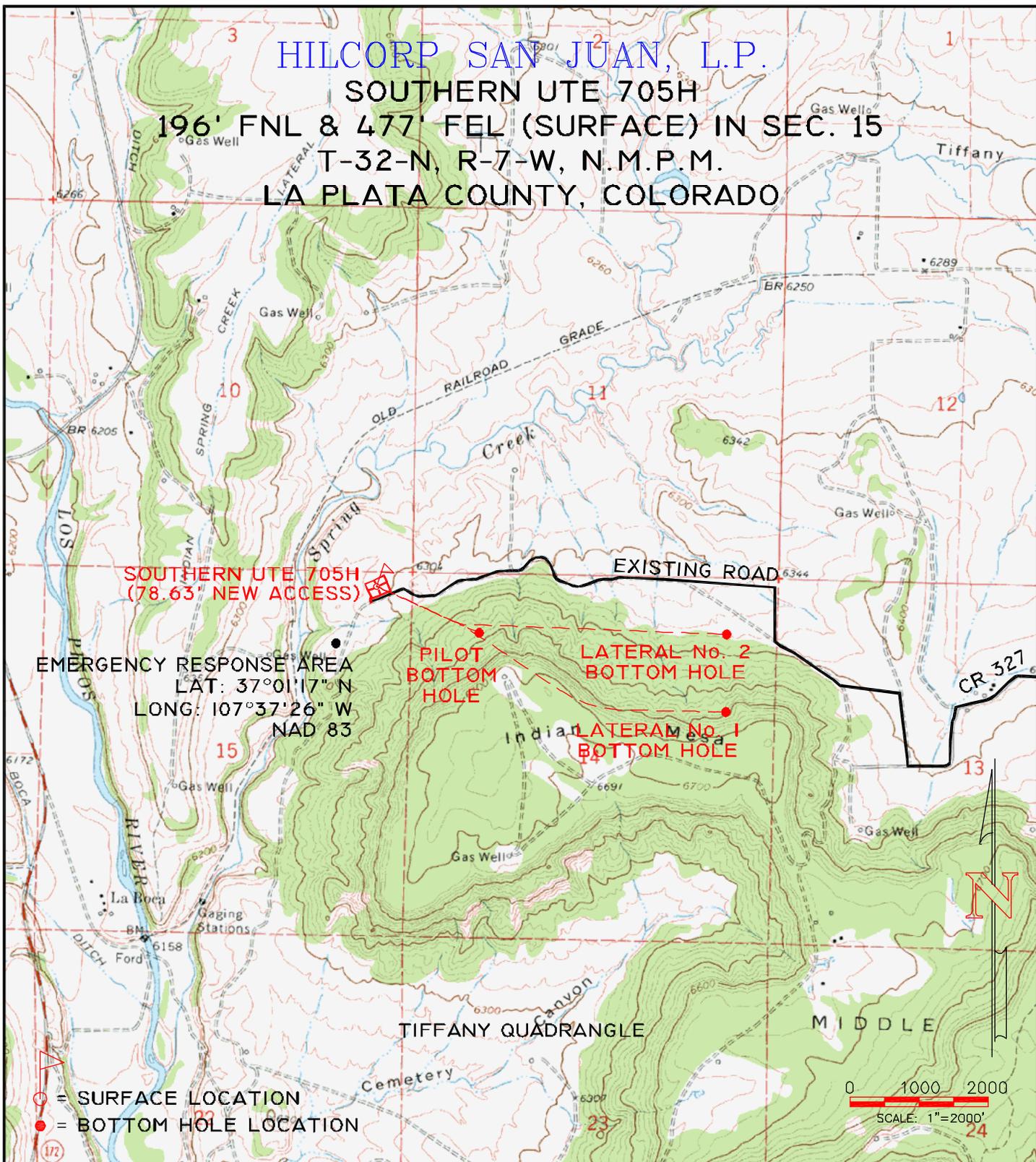
HILCORP SAN JUAN, L.P.

SOUTHERN UTE 705H

196' FNL & 477' FEL (SURFACE) IN SEC. 15

T-32-N, R-7-W, N.M.P.M.

LA PLATA COUNTY, COLORADO



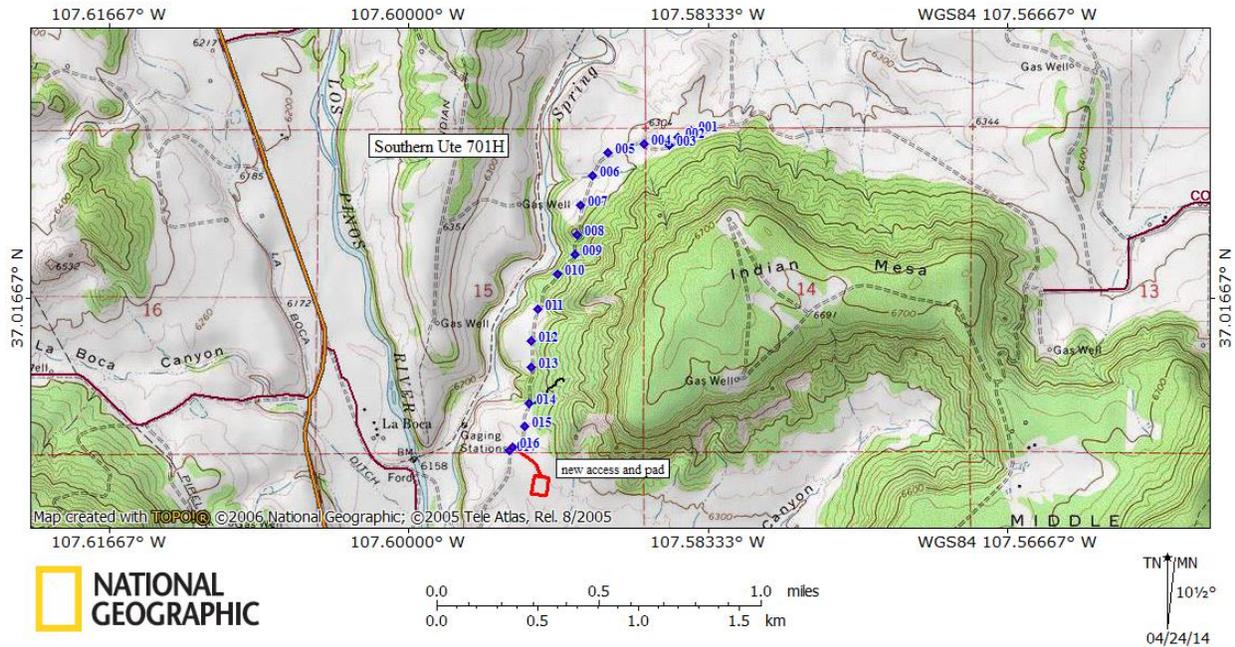
SURFACE TYPE: MARY S. AUSTIN ESTATE
 196' FNL, 477' FEL (SURFACE) SEC. 15
 840' FNL, 1025' FWL (PILOT BHL) SEC. 14
 1922' FNL, 716' FEL (LATERAL No. 1 BHL) SEC. 14
 FOOTAGES: 798' FNL, 721' FEL (LATERAL No. 2 BHL) SEC. 14
 SEC. 14 & 15 TWN. 32 N RNG. 7 W N.M.P.M.
 LAT: N 37.0238003° LONG: W 107.5885303° (NAD 83)
 ELEVATION: 6288.2

HILCORP SAN JUAN, L.P.



P.O. BOX 3651
 FARMINGTON, NM 87499
 OFFICE: (505) 334-0408

DWG. No. : 11736T02	REVISION: 1
DRAWN BY: C.B.	DATE DRAWN: 02/28/23
SURVEYED: 1/30/14	APP. BY: J.A.V.
	REV. DATE:
	SHEET: 1

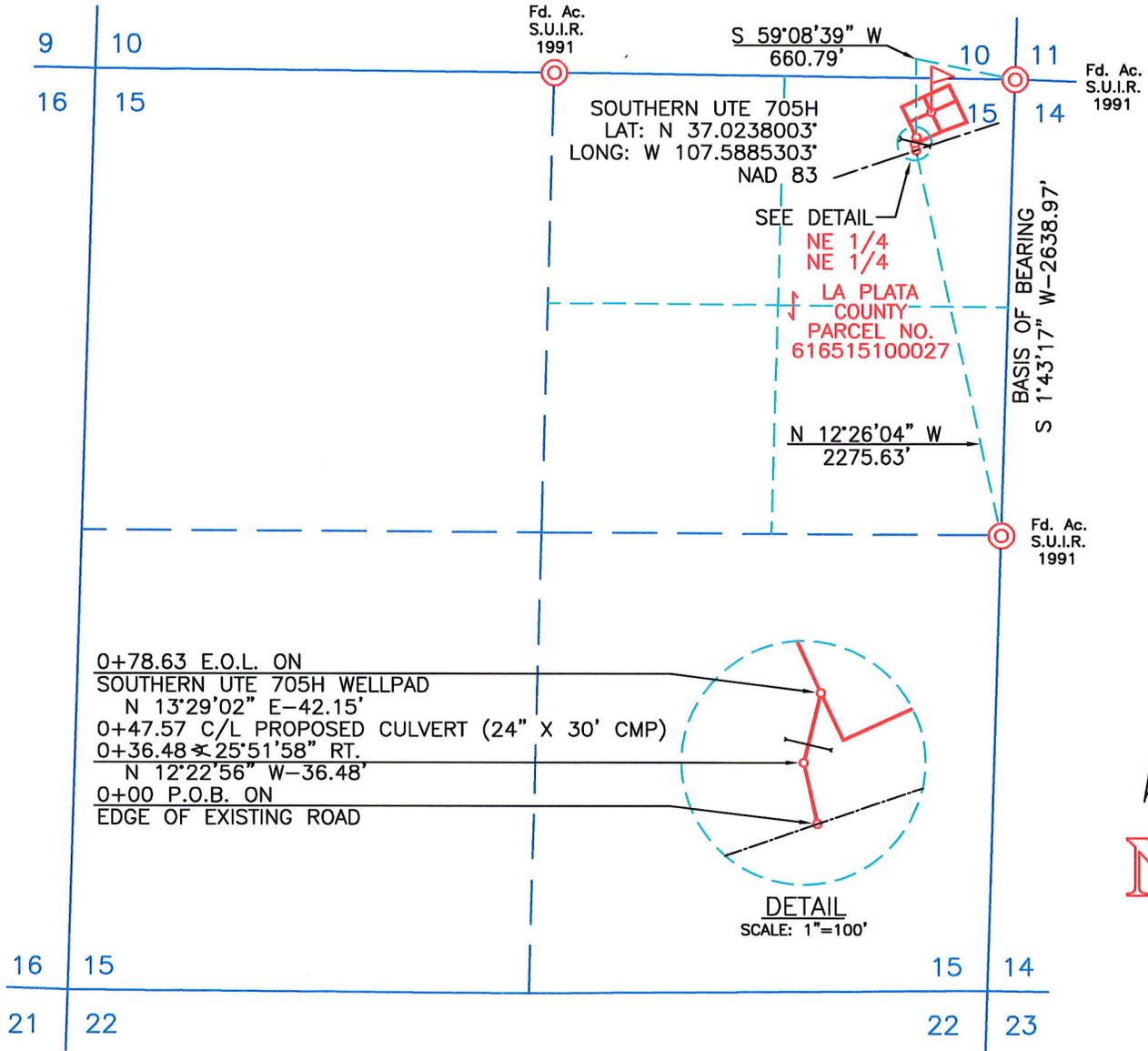


Southern Ute 705H SUPO

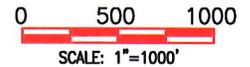
1. 37.02414,-107.58427 BEGIN UPGRADE
2. 37.02382,-107.58501 INSTALL 1- 24" X 30' CMP
3. 37.02352,-107.58549 INSTALL 1- 24" X 30' CMP
4. 37.02357,-107.58689 ,INSTALL 1- 24" X 40' CMP DUMP RUN OFF INTO SILT TRAP
5. 37.02314,-107.58894 INSTALL 1- 24" X 40' CMP PLACE AT LONG ANGLE
6. 37.02213,-107.58977 EXTEND 24" CMP 10' TO THE WEST
7. 37.02079,-107.59042 INSTALL 1-24" X 40' CMP
8. 37.01947,-107.59064 INSTALL 1- 24" X 30' CMP
9. 37.01862,-107.59074 LOW WATER CROSSING
10. 37.01773,-107.59171 INSTALL 1- 24" X 30' CMP
11. 37.01619,-107.59281 LOW WATER CROSSING
12. ,37.01475,-107.59318 ,INSTALL 1- 24" X 40' CMP AT LONG ANGLE
13. ,37.01357,-107.59320 INSTALL 1- 24" X 40' CMP
14. 37.01194,-107.59331 INSTALL 2- 24" X 40' CMP SLIDE ROAD TO WEST 10'
15. ,37.01093,-107.59358 ,INSTALL 1- 24" X 30' CMP
16. 37.01003,-107.59422 BEGIN NEW ACCESS
17. 37.00988,-107.59440 END PROJECT

HILCORP SAN JUAN, L.P.

SOUTHERN UTE 705H PROPOSED ACCESS ROAD NE 1/4 SEC. 15, T-32-N, R-7-W, N.M.P.M. LA PLATA COUNTY, COLORADO



- NOTES:**
- BASIS OF BEARING: MONUMENTED EAST LINE OF THE NE 1/4 OF SECTION 15, T-32-N, R-7-W, N.M.P.M., LA PLATA COUNTY, COLORADO.
BEARS: S 1°43'17" W - 2638.97'
 - ALL BEARINGS & DISTANCES SHOWN ARE BASED UPON THE COLORADO COORDINATE SYSTEM, SOUTH ZONE, NAD 83.



OWNER	STATION	FEET/RODS
LA PLATA COUNTY PARCEL NO. 616515100027	0+00 TO 0+78.63	78.63/4.765

P.O.B. = POINT OF BEGINNING
E.O.L. = END OF LINE

I, JOHN A. VUKONICH, BEING A PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THE SURVEY REPRESENTED BY THIS PLAT WAS MADE BY ME OR UNDER MY DIRECT SUPERVISION AND THAT THIS PLAT ACCURATELY REPRESENTS THE SURVEY TO THE BEST OF MY KNOWLEDGE AND BELIEF.

JOHN A. VUKONICH, CO. P.L.S. #3823
 DATE

HILCORP SAN JUAN, L.P.



P.O. BOX 3651
FARMINGTON, NM 87499
OFFICE: (505) 334-0408

DWG. NO. : 11736A01	REVISION: 1
DRAWN BY: K.S.	DATE DRAWN: 01/27/23
SURVEYED: 01/30/14	APP. BY: J.A.V.
	SHEET: 1

SHEET B3



Hilcorp

Road Maintenance Plan

The following Road Maintenance Plan will be implemented and followed by Hilcorp Energy Company (Hilcorp) for roads utilized in its San Juan Basin Operations. All roads will be constructed and maintained to meet Bureau of Land Management (BLM) Gold Book Standards, BLM Manuals 9113-1 (Roads Design Handbook), and BLM Manuals 9113-2 (Roads National Inventory and Condition Assessment Guidance and Instructions Handbook).

Road Inspections

1. A Hilcorp representative or designated inspector will conduct regular inspections of all newly constructed, reconstructed, and improved roads used for construction, operation, maintenance, and termination of Hilcorp's oil and gas operations.
2. Inspector will examine roads for proper maintenance of key features including: reduction of ruts and holes, maintenance of crowns and sloped areas related to the roads, condition of surface materials, efficacy of culverts and sediment traps, condition of interim reclamation, and presence of noxious weeds.
3. Road inspections will be conducted within 5 business days of major storm events such as major snow melt or prolonged rain, in order to ensure proper operation of drainage systems, and erosion and sediment control structures and features.
4. Inspectors will examine the roadways and document the inspection using the attached checklist during each inspection.
5. Inspection records will be filed and provided to the BLM upon written request.

Maintenance Procedures

For existing County Roads or roads that are considered collector roads, Hilcorp would defer to the county or to the Roads Committee, when formed, for maintenance determinations.

Roads would be maintained to the same or better condition as existed prior to the commencement of operations. Maintenance would continue until final abandonment and reclamation of Hilcorp's related oil and gas operation.

Best management practices (BMPs) for dust abatement and erosion control would be utilized along the roads to reduce fugitive dust on as needed basis. Water application using a rear-spraying truck or other suitable means would be the primary method of dust suppression along the roads.

No routine maintenance activities would be performed during periods when the soil is too wet to adequately support construction equipment. If equipment creates ruts deeper than 6 inches, the soil would be deemed too wet for construction or maintenance.

In addition to regular maintenance, road inspection would be used to identify any additional maintenance needs.



Road and Drainage Structures and Features

1. Road Crown

Maintenance of road crowns will be conducted to rectify ruts, holes, and rough areas and ensure adequate drainage on road features and outlopes. Needed maintenance will be conducted using a maintainer to re-grade and/or resurface the road crown.

2. Culverts

Culverts and silt trap maintenance and/or repair will be conducted on as-needed basis, using hand tools or machinery such as a back hoe. Excavation and debris removal activities will be conducted in accordance to the requirements of the surface management agency and conducted with compliance to applicable Clean Water Act-Best Management Practices, and applicable requirements for passage for aquatic species. If the culvert is damaged by having its inlet or outlet crushed, it would be replaced.

3. Ditches

Road side ditches will be maintained to ensure proper function, on as-needed basis, using maintainer or the appropriate equipment to clear and/or blade as necessary. Maintenance activities will be implemented with consideration of resource objective for soil, water, and visual quality as is feasible with relation to maintenance costs.

4. Silt Traps and Water Control Structures

Silt traps and water control structures will be maintained to ensure proper function, on as-needed basis using maintainer or the appropriate equipment to clear, excavate, and/or blade as necessary. Sediment removed from silt traps and water control structures would be disposed at an approved facility or utilized for construction activities with the approval of the surface management agency.

5. Replacement of Road Surface Material

Road surface material will be maintained and supplemented/replaced on as-needed basis, using the appropriate substrate from an approved source, in order to maintain proper road operation and condition.

6. Maintenance of Interim Reclamation

Disturbance related to maintenance activities will be subject to interim reclamation and stabilizations standards and guidelines, in order to meet objectives outlined in the reclamation plan, as pertaining to projects on case-by-case basis.

7. Noxious Weeds

Should any noxious or invasive weeds be documented during the inspection and/or maintenance activities, the BLM/FFO weed coordinator will provide Hilcorp with specific requirements and instructions for weed treatments, including the period of treatment, list of approved herbicides, required documentation to be submitted to the BLM/FFO after treatment, and any other site-specific instructions that may be applicable.



Hilcorp Road Inspection and Maintenance Report Form				
Road Inspected (Well ID):		Type of Area:		
Title of Inspector:		Access Road to Well Pad:		
Name of Inspector:		Type of Inspection: (Monthly/Major Storm/Winter Event)		
Site Inspection Information				
Road Condition Checklist				
Road Feature:	Good	Poor	Action Needed	Comments
Road Crown				
Surface Condition (slopes/gravel)				
Surface Drainage				
Culvert(s)				
Ditches and Turnouts				
Revegetation				
Noxious Weeds				
Sediment Control:	Good	Poor	Action Needed	Comments
Check Dam				
Silt Trap/Sediment Pond				
Filter Berm				
Sediment Trap				
Sediment Basin				
Wattles				
Silt Fence				
Actions Taken			Date Work Was Performed	
Type of Inspection	Date:	Signature:		

Signature certifying that the site is in compliance (after all the necessary repairs, maintenance, and changes are completed)

Date

Signature

January 27, 2023

HILCORP SAN JUAN, L.P.
SOUTHERN UTE 705H PROPOSED ACCESS ROAD
LOCATED IN THE NE 1/4 OF
SECTION 15, T-32-N, R-7-W, N.M.P.M.
LA PLATA COUNTY, COLORADO

THE DESCRIPTION OF A 20 FOOT RIGHT-OF-WAY FOR A PROPOSED ACCESS ROAD, LOCATED IN THE NE QUARTER OF SECTION 15, TOWNSHIP 32 NORTH, RANGE 7 WEST, N.M.P.M., LA PLATA COUNTY, COLORADO, BEING 10 FEET ON BOTH SIDES OF THE FOLLOWING DESCRIBED CENTERLINE:

COMMENCING AT A FOUND 1991 S.U.I.R. ALUMINUM CAP FOR THE EAST QUARTER CORNER OF SAID SECTION 15, THENCE NORTH 12°26'04" WEST A DISTANCE OF 2275.63 FEET TO THE "POINT OF BEGINNING" FOR THIS DESCRIPTION;
THENCE NORTH 12°22'56" WEST, A DISTANCE OF 36.48 FEET;
THENCE NORTH 13°29'02" EAST A DISTANCE OF 42.15 FEET TO THE END OF THIS DESCRIPTION AT A POINT IN SAID NORTHEAST QUARTER OF SECTION 15. SAID POINT BEARS SOUTH 59°08'39" WEST, A DISTANCE OF 660.79 FEET FROM A FOUND 1991 S.U.I.R. ALUMINUM CAP FOR THE NORTHEAST CORNER OF SAID SECTION 15.

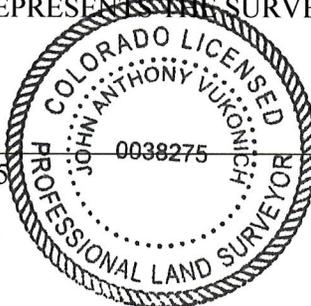
THE TOTAL LENGTH OF THE CENTERLINE AS DESCRIBED ABOVE, IS 78.63 FEET, 4.765 RODS OR 0.015 MILE. 20 FOOT RIGHT-OF-WAY CONTAINS 0.036 ACRE, MORE OR LESS.

BASIS OF BEARING - THE MONUMENTED EAST LINE OF THE NORTHEAST QUARTER OF SECTION 15, T-32-N, R-7-W, N.M.P.M., LA PLATA COUNTY, COLORADO. LINE BEARS SOUTH 1°43'17" WEST A DISTANCE OF 2638.97 FEET AS MEASURED BY GPS.

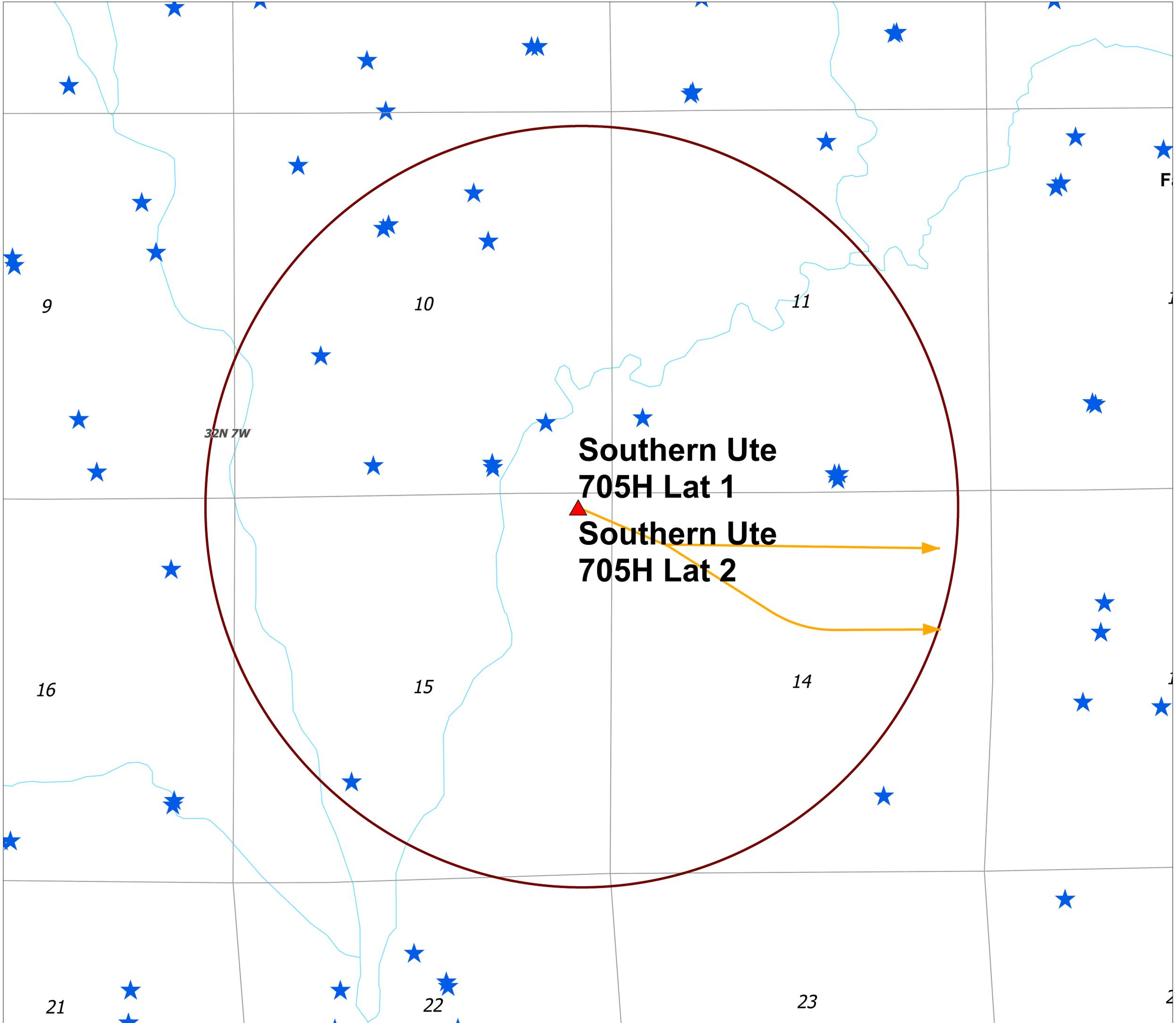
SURVEYOR'S CERTIFICATION

I, JOHN A. VUKONICH, BEING A PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THE SURVEY REPRESENTED BY THIS DESCRIPTION WAS MADE BY ME OR UNDER MY DIRECT SUPERVISION AND THAT THIS DESCRIPTION ACCURATELY REPRESENTS THE SURVEY TO THE BEST OF MY KNOWLEDGE AND BELIEF.

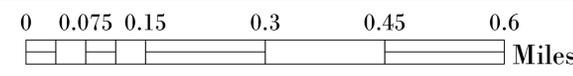

JOHN A. VUKONICH, CO. P.L.S. #38275



3/25/2023
DATE

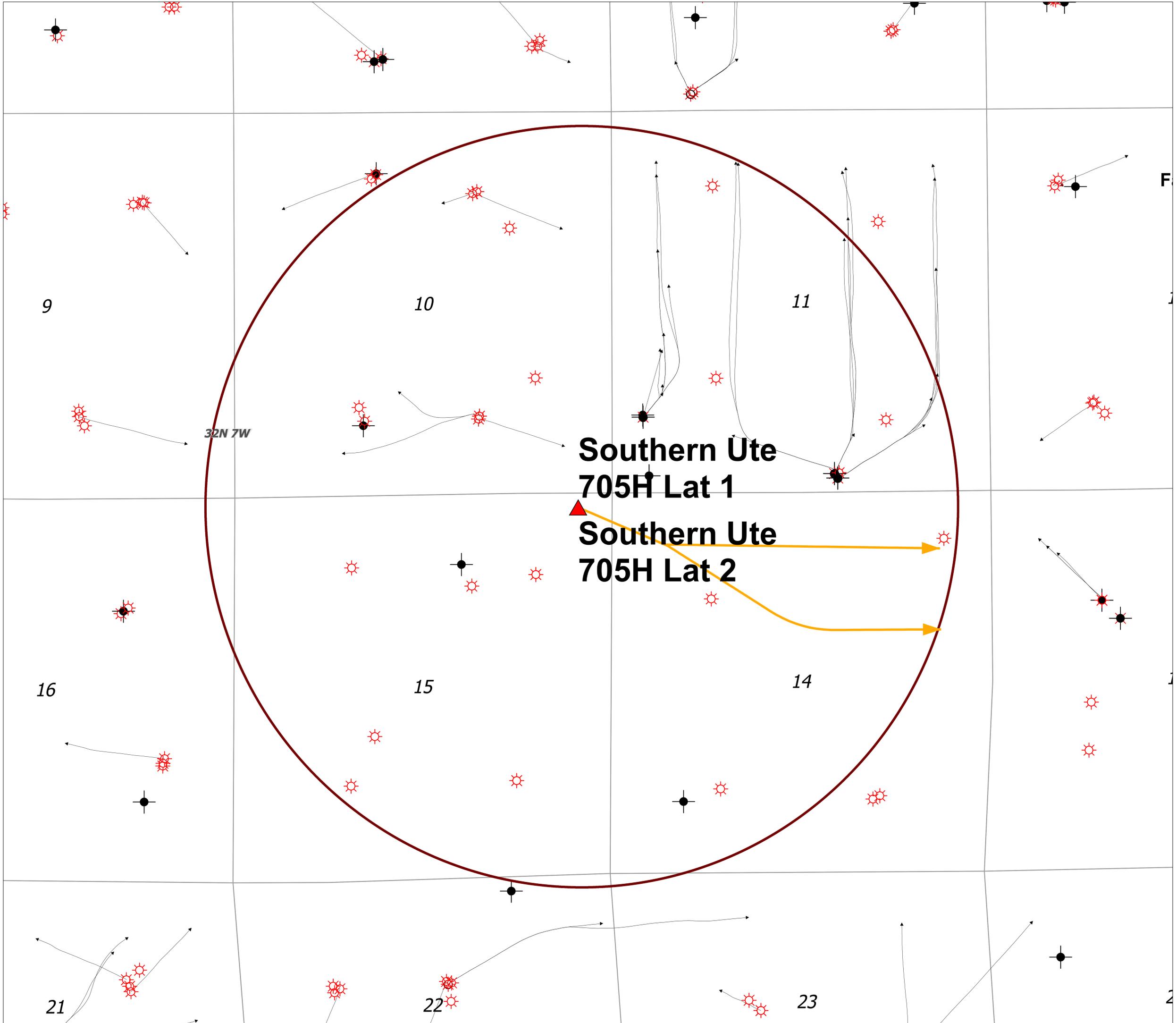


- ▲ Southern Ute 705H SH
- ★ CO Water Wells
- Southern Ute 705H Wellbore
- Waterways
- Southern Ute 705H SH 1 mile buffer



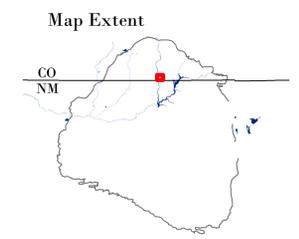
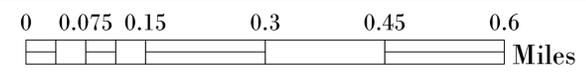
**Southern Ute 705H
1 mile buffer**

SHEET D2

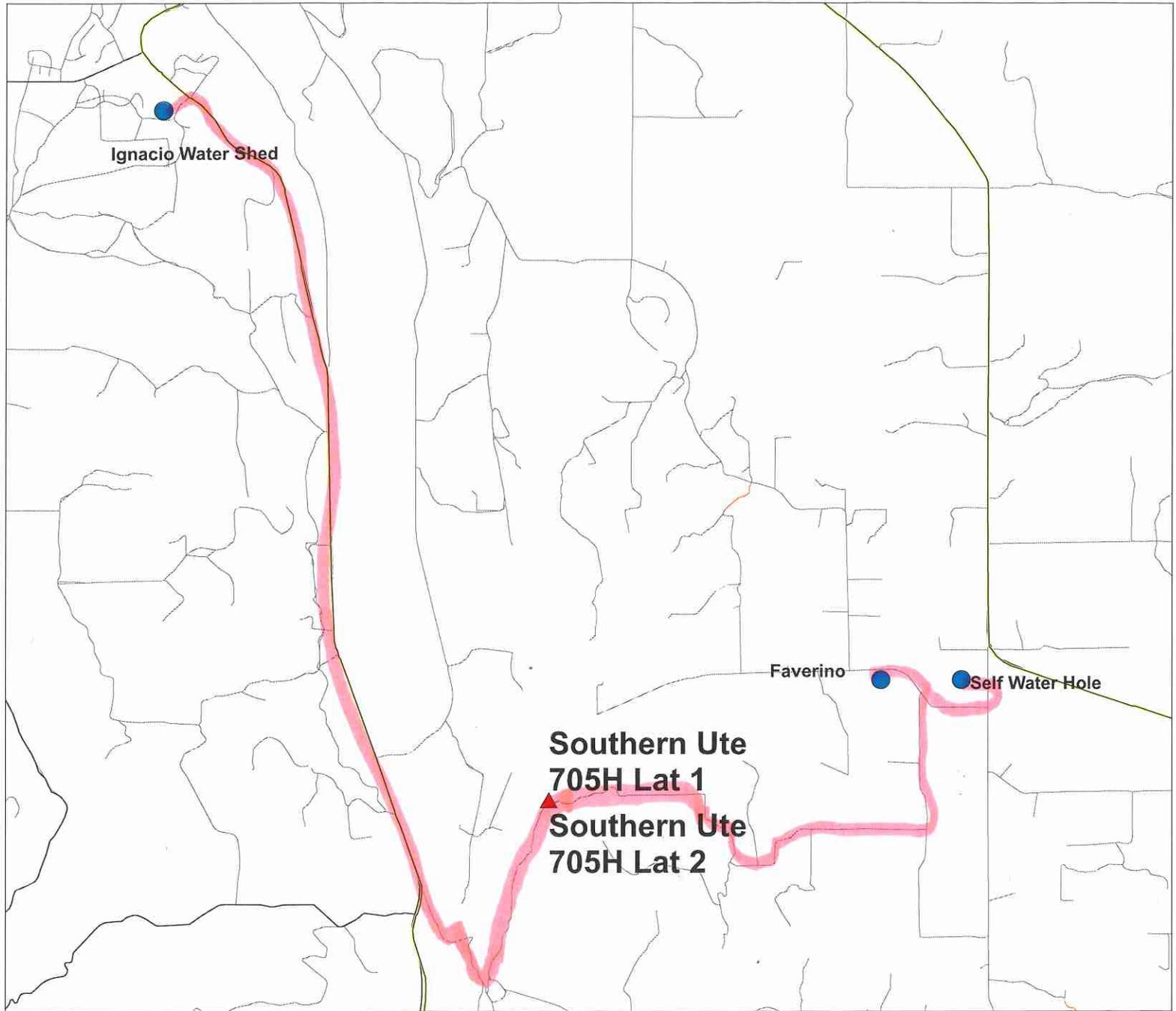


-  Southern Ute 705H SH
-  Southern Ute 705H Wellbore
-  Southern Ute 705H SH 1 mile buffer
-  Gas Well
-  Abandoned Loc
-  Location
-  Well Paths

SHEET D1

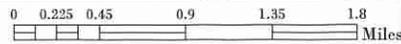


**Southern Ute 705H
1 mile buffer**



- ▲ Southern Ute 705H SH
- Highways
- No Access
- Main Road
- Road

[Redacted] - Preferred Water Transportation Route



**Southern Ute 705H
Water Trucking**

Coordinate System: NAD 1983 StatePlane New Mexico West FIPS 3008	Scale: 1:14,421.87	Author: GTS	Date: 4/23/2013
File Path: U:\Farmington\Depts\GIS\Requests\AFD Maps.mxd			

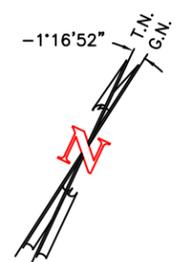
HILCORP SAN JUAN, L.P.

SOUTHERN UTE 705H - 196' FNL & 477' FEL (SURFACE) IN SECTION 15
 840' FNL & 1025' FEL (PILOT BOTTOM HOLE) IN SECTION 14
 1922' FNL & 716' FEL (LATERAL NO. 1 BOTTOM HOLE) IN SECTION 14
 798' FNL & 721' FEL (LATERAL NO. 2 BOTTOM HOLE) IN SECTION 14
 T-32-N, R-7-W, N.M.P.M., LA PLATA COUNTY, COLORADO
 GROUND ELEVATION: 6288.2

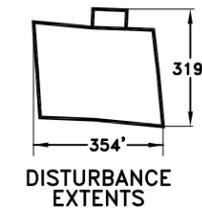
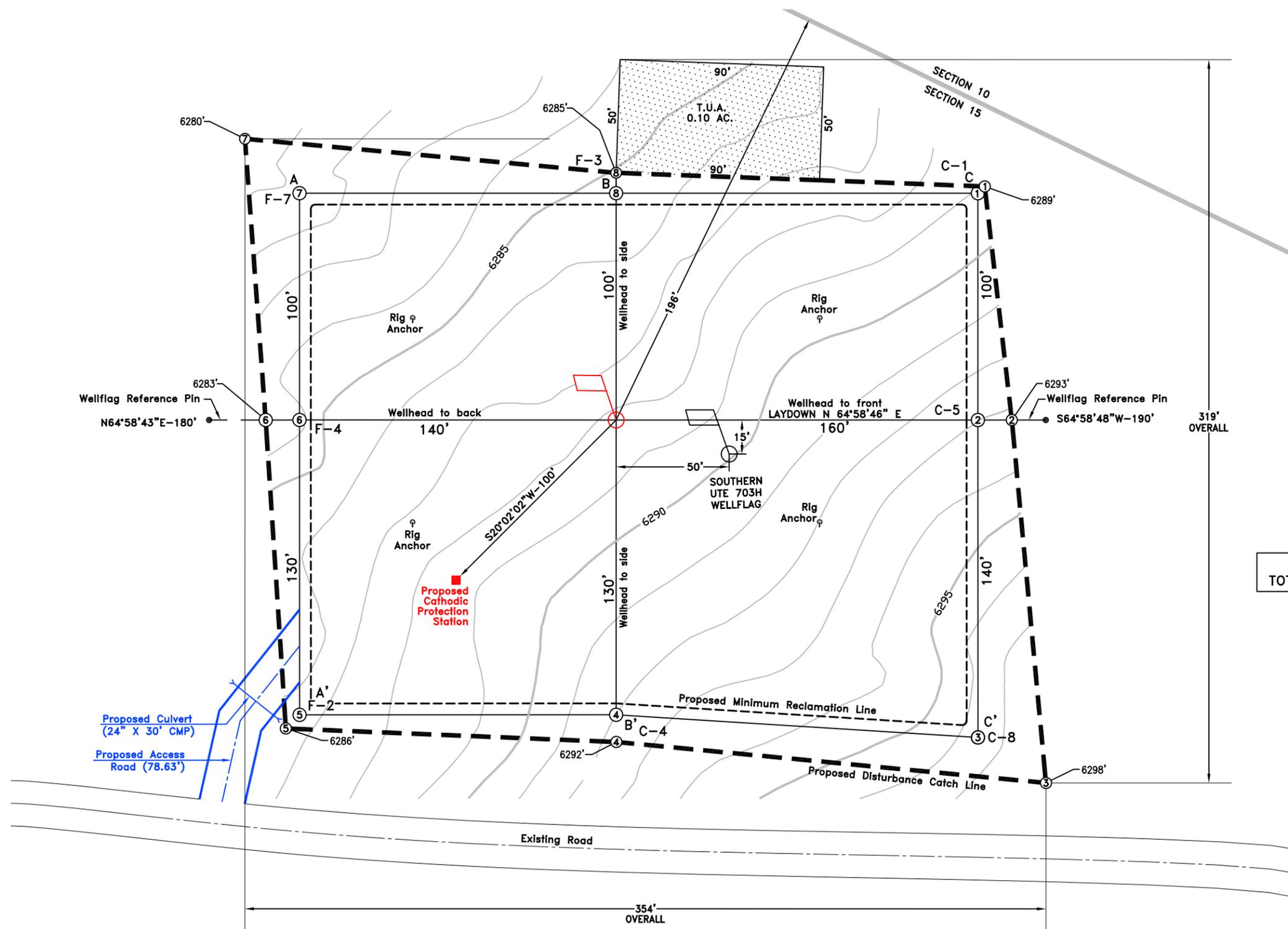
SOUTHERN UTE 705H
 LATITUDE: 37.0238003° N
 LONGITUDE: 107.5885303° W
 NAD 83
 LATITUDE: 37°01.42778' N
 LONGITUDE: 107°35.27519' W
 NAD 27

PROPOSED CATHODIC PROTECTION STATION
 LATITUDE: 37.0235402° N
 LONGITUDE: 107.5886404° W
 NAD 83
 LATITUDE: 37°01.41217' N
 LONGITUDE: 107°35.28180' W
 NAD 27

G.N.=GRID NORTH
 T.N.=TRUE NORTH
 CONVERGENCE AT SURFACE LOCATION



0 25 50
 SCALE: 1"=50'



LEVEL PAD AREA = 1.60 ACRE(S)
 TOTAL PERMITTED AREA = 2.05 ACRE(S)

LEGEND
 T.U.A. = TEMPORARY USE AREA

- NOTES:**
- 1.) BEARINGS & DISTANCES SHOWN ARE REFERENCED TO THE COLORADO COORDINATE SYSTEM, SOUTH ZONE, NAD 83.
 - 2.) CONTRACTOR SHALL CONTACT "ONE-CALL" FOR LOCATION OF ANY MARKED OR UNMARKED BURIED PIPELINES OR CABLES ON WELLPAD AND/OR ACCESS ROAD AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION.
 - 3.) UNITED FIELD SERVICES, INC. IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES.
 - 4.) CUT & FILL CALCULATIONS ARE ROUNDED TO THE NEAREST FOOT AND DO NOT REPRESENT ACTUAL CONSTRUCTION STAKING.

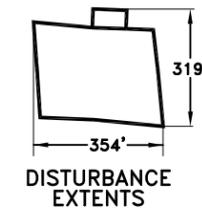
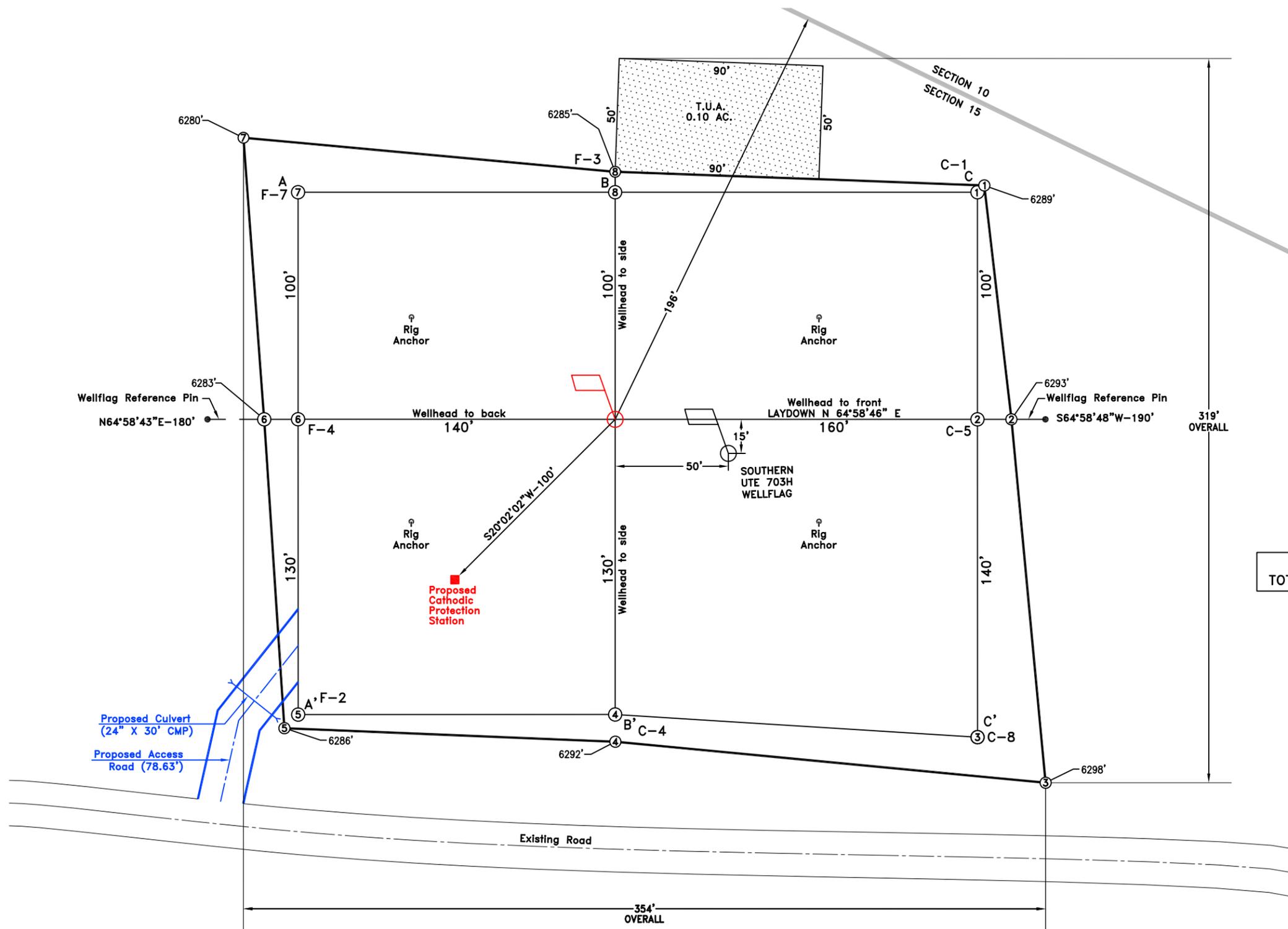
		P.O. BOX 3651 FARMINGTON, NM 87499 OFFICE: (505) 334-0408	
DWG. NO. : 11736L02	DATE DRAWN: 01/27/23	REVISION: 2	
DRAWN BY: K.S.	DATE DRAWN: 01/27/23	REV. DATE: 03/18/23	
SURVEYED: 01/30/14	APP. BY: J.A.V.		

HILCORP SAN JUAN, L.P.

SOUTHERN UTE 705H - 196' FNL & 477' FEL (SURFACE) IN SECTION 15
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 T-32-N, R-7-W, N.M.P.M., LA PLATA COUNTY, COLORADO
 GROUND ELEVATION: 6288.2

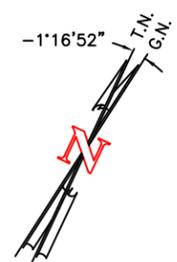
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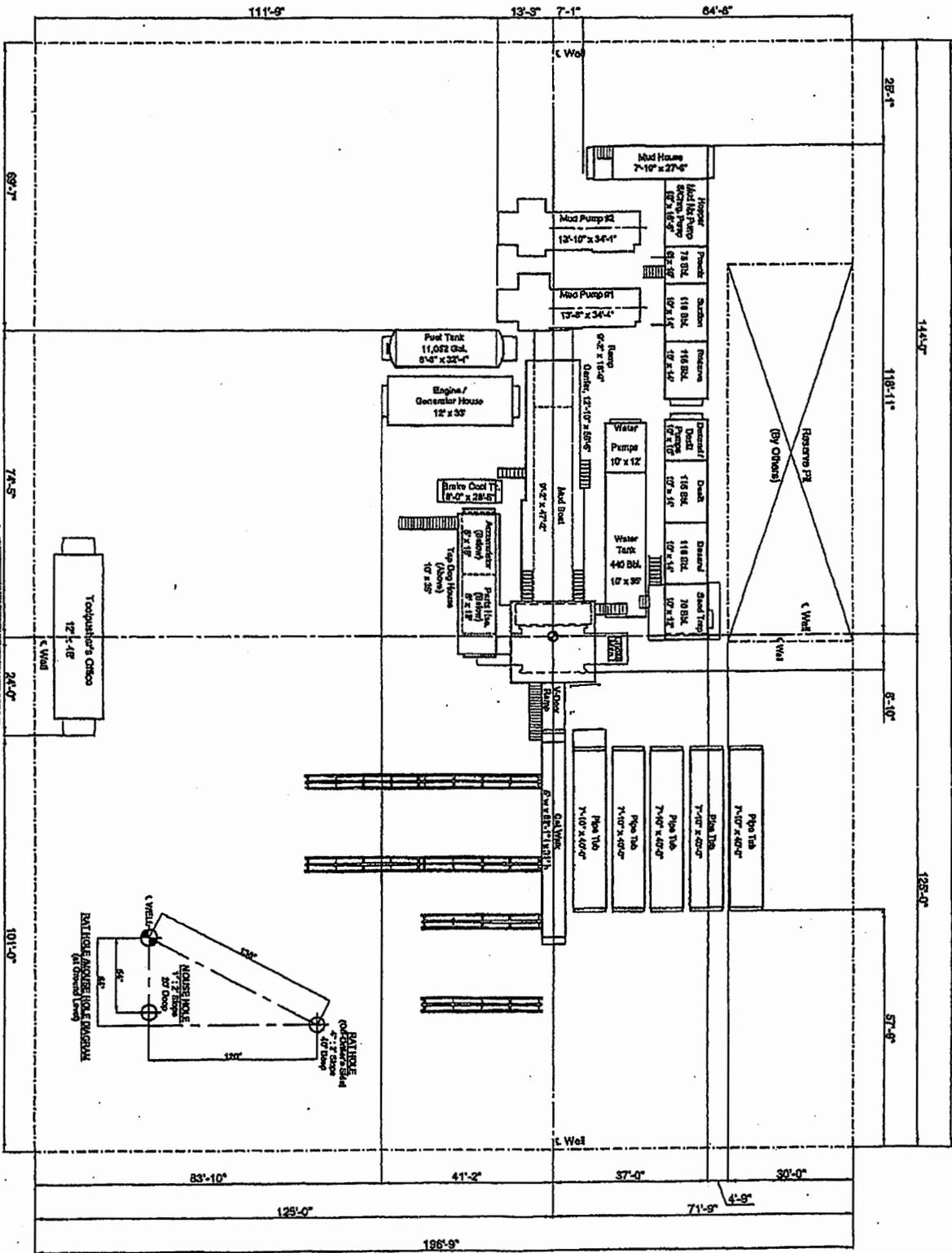
0 25 50
 SCALE: 1"=50'

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		P.O. BOX 3651 FARMINGTON, NM 87499 OFFICE: (505) 334-0408	
DWG. NO. : 11736L01	DATE DRAWN: 01/27/23	REVISION: 2	REV. DATE: 03/18/23
DRAWN BY: K.S.	APP. BY: J.A.V.		
SURVEYED: 01/30/14			

SHEET G1



D & J Drilling

Fig # 3



Hilcorp Energy Company
1111 Travis Street
Houston, Texas 77002
Phone: (713) 209-2400

Revegetation Plan for Southern Ute 705H

Surface Hole Location: 196' FNL & 477' FEL,
Unit Letter A (NENE) Sec. 15, T32N, R7W

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I. BACKGROUND

Applicant:	Hilcorp San Juan, L.P.
Project Type:	Horizontal Oil & Gas Well Project
Project Name:	Southern Ute 705H
Legal Location:	E/2 of Section 15 and the E/2 of Section 22, Township 32 North, Range 7 West, New Mexico Principle Meridian (NMPM), in La Plata County, Colorado.

Introduction

This reclamation plan has been prepared based on requirements and guidelines of the Bureau of Land Management (BLM) Tres Rios Field Office, and Onshore Oil and Gas Order No. 1.

The Burlington contact person for this Reclamation Plan is:

Bobby Spearman
Construction Foreman
505-324-5112
bspearman@hilcorp.com

Plans for Surface Reclamation

According to Onshore Oil and Gas Order No. 1 under the authority of the Code of Federal Regulations, Title 43: Subpart 3164, the operator must submit a plan for the surface reclamation or stabilization of all disturbed areas. This plan must address interim (during production) reclamation for area of the well pad not needed for production, as well as final abandonment of the well location, facilities or improvements.

Revision of the Reclamation Plan

Burlington may submit a request to the BLM/SUIT to revise the Reclamation Plan at any time during the life of the project in accordance to page 44 of the Gold Book (USDI-USDA 2007). Burlington will include justification for the revision request.

Project Description

The proposed project is located on private lands and on the Southern Ute Indian Reservation (SUIR) in La Plata County, Colorado. This Surface Reclamation Plan will address the portion of the project located on SUIR lands administered by the Southern Ute Indian Tribe and the Bureau of Indian Affairs, Ignacio, Colorado; and the Bureau of Land Management's Tres Rios Field Office, Durango, Colorado.

The proposed well pad, the proposed access road, and approximately 2,436 feet of the proposed subsurface well-tie pipeline would be on private land. The remaining 7,287-foot subsurface pipeline corridor would be located approximately 1.7 miles north of the Colorado-New Mexico State line and 6.8 miles southeast of Ignacio. The pipeline corridor is situated east of Spring Creek near the southeastern base of Indian Mesa in Great Basin Desert scrub habitat.

Estimated Total Area of Disturbance

The entire well pad, including one temporary use area (TUA) and construction buffer area, would be constructed on the Mary S. Austin Estate fee lands within a total permitted area of 2.05 acres. The project would require the construction of a 78.63-foot access road within a 20-foot-wide corridor

which would result in approximately 0.036 acre of new surface disturbance. Once the well has been completed and proves to be viable, Hilcorp would construct a subsurface well-tie pipeline overlapping the proposed well pad area and would not result in new surface disturbance. Total potential new surface disturbance for the development would be approximately 2.086 acres

The TUA would be reclaimed following construction. Production equipment will be placed on the well pad in such a manner to allow proper safe access to produce and service the well/facilities while minimizing long-term disturbance and maximizing interim reclamation. As practical, access will be provided by a tear-drop shaped road through the production area. The well pad area will be reclaimed to an approved working area.

Pre-Disturbance Site Visit and Site Conditions

This plan is based on observations made during numerous pre-disturbance site visits and compiled from information obtained from consultation with multiple agencies including SUIT, BLM-Tres Rios, and BIA.

Vegetation Community

Based on observations made during pre-disturbance site visits, it has been determined that the vegetation community which best represents the proposed project area is Piñon-Juniper Woodland Community. This community is typically associated with a significant shrub component, notably antelope bitterbrush, mountain-mahogany, rabbitbrush species, sagebrush species, scrub oak, and Utah serviceberry. A mix of warm and cool season grasses are also often present, including blue grama, bottlebrush squirreltail, Indian ricegrass, muttongrass, needle-and-thread grass, prairie junegrass, sand dropseed, and Western wheatgrass. Piñon-Juniper Woodland Community can exhibit shallow, rocky soils (persistent) or deep soils (wooded shrubland).

Proposed Reclamation Seed Mix

Hilcorp will use the Mix #1 reclamation seed mix developed by the SUIT Department of Natural Resources, Range Division, for use on lands around the Los Piños River valley and east of U.S. Highway 550 on the SUIR (see Table 1 below).

Table 1. SUIT Mix #1 Reclamation Seed Mix

Common Name	Scientific Name	Pounds/PLS/acre
Western wheatgrass	<i>Agropyron smithii</i>	7
Antelope bitterbrush	<i>Purshia tridentata</i>	1
Smooth brome	<i>Bromus inermis</i>	4
Intermediate wheatgrass	<i>Thinopyrum intermedium</i>	3
Annual Sterile Ryegrass or Sterile Triticale		12

Vegetation Reclamation Standards

The SUIT Department of Natural Resources, Range Division considers a site adequately reclaimed once 70 percent revegetation has been achieved. Hilcorp will monitor the progress of reclamation along the proposed Southern Ute 705H pipeline with during routine site inspections in conjunction with stormwater management practices at the site. The SUIT will be notified upon attainment of 70 percent revegetation within the pipeline corridor.

Pre-Disturbance Weed Survey

During the pre-disturbance site visit, the proposed action area was surveyed for invasive and/or noxious weeds listed by La Plata County, the State of Colorado, and the SUIT. During the survey, no noxious weeds were documented within the proposed action area.

Pre-Disturbance Site Photographs

Photographs can be found in Appendix C of the Biological Assessment on file with the BLM Tres Rios Field Office or SUIT Department of Natural Resources, Division of Wildlife Resource Management.

II. PLAN FOR SURFACE RESTORATION

Techniques for Successful Revegetation

Vegetation and Site Clearing

Woody vegetation, such as large shrubs and trees, will be cleared from the staked project area and stockpiled for later use as soil mulch, visual mitigation, and/or wildlife shelter.

Surface rocks (where present and useful for reclamation) will be stockpiled adjacent to the topsoil stockpile. During reclamation activities, the surface rock will be placed within the area of reclamation for erosion control or in a manner that visually blends with the adjacent undisturbed area.

Topsoil Stripping, Storage, and Redistribution

If available, the upper 6 inches of topsoil will be stripped, following vegetation and site clearing during construction activities. Hilcorp contractors will take care not to mix topsoil with the underlying subsoil horizons and will stockpile the topsoil separately from subsoil or other excavated material. Topsoil and sub-surface soils will be replaced in the proper order, prior to final seedbed preparation.

Water Management/Erosion Control Features

Hilcorp will use appropriate erosion control/water management design features within the proposed project area. Hilcorp will use straw wattles as appropriate to limit erosion and sediment transport from any stockpiled soils. A completed stormwater management plan is being drafted and will be on file with the SUIT Department of Natural Resources, Water Resources Division.

Seedbed Preparation

Areas to be reclaimed will be re-contoured to blend with the surrounding landscape, emphasizing restoration of existing drainage patterns and landform to pre-construction condition, to the extent practicable.

Seedbed preparation of compacted areas will be ripped to a minimum depth of 12 inches, with a maximum furrow spacing of 2 feet. Where practicable, ripping will be conducted in two passes at perpendicular directions. Disking will be conducted if large clumps or clods remain after ripping. Any tilling or disking that occurs along the contour of the slope and seed drills will also be run along the contour to provide terracing and prevent rapid run-off and erosion. If broadcast seeding is used, a dozer or other tracked equipment will track perpendicular to the slope prior to broadcast seeding.

Following final contouring, the backfilled or ripped surfaces will be covered evenly with stockpiled topsoil. Final seedbed preparation will consist of raking or harrowing the spread topsoil prior to seeding to promote a firm (but not compacted) seedbed without surface crusting. Seedbed preparation may not be necessary for topsoil storage piles or other areas of temporary seeding.

Soil Treatments

It has not been determined at this time if soil amendments will be used during reclamation of the affected environment.

Seeding

Seeding will occur within 90 days following project completion.

A Truax seed drill or modified rangeland drill that allows for seeding species from different seed boxes at different planting depths will be used to seed the disturbed areas of the project area. Hilcorp or its reclamation contractor will ensure that perennial grasses and shrubs are planted at the appropriate depth. Intermediate size seeds (such as wheatgrasses and shrubs) will be planted at a depth of 1 to 2 inches. Small seeds (such as alkali sacaton and sand dropseed) will be planted at a depth of 0.25 inch. In situations where differing planting depths are not practicable using available equipment, the entire seed mix will be planted no deeper than 0.25 inch.

Drill seeding may be used on well-packed and stable soils that occur on gentler slopes and where equipment and drills can safely operate. Where drill seeding is not practicable due to topography, the reclamation contractor will hand-broadcast seed using a "cyclone" hand seeder or similar broadcast seeder. Broadcast application of seed requires a doubling of the drill-seeding rate. The seed will then be raked into the ground so the seed is planted no deeper than 0.25 inch below the surface.

Mulching

Hand seeding with hydro-mulch, excelsior netting, and/or mulch with netting may be required on cut and fill slopes. Mulch should be grass or straw spread at 2,000 to 3,000 pounds per acre, or approximately 1 to 2 inches deep. Mulching will consist of crimping certified weed-free straw or certified weed-free native grass hay into the soil.

Straw or native grass hay mulch can be applied by hand broadcasting or blowing to a relatively uniform depth of 2 to 3 inches, equivalent to a rate of approximately 2 tons per acre (one 74-pound bale per 800 square feet). When applied properly, approximately 20 to 40 percent of the original ground surface will be visible.

Straw or native grass hay mulch will then be anchored using one of the following methods:

- Hand Punching – a spade or shovel is used to punch mulch into the topsoil at 1-foot intervals until all areas have mulch standing perpendicular to the slope and the mulch is embedded at least 4 inches into the soil.
- Roller Punching – a roller is used to spread mulch over an area; the roller is equipped with straight studs not less than 6 inches long, from 4 to 6 inches wide, and approximately 1 inch thick.
- Crimper Punching – similar to roller punching, a crimper is used over the soil. The crimper has serrated disk blades about 4 to 8 inches apart that force the mulch into the soil. Crimping should be done in two directions with the final pass across the slope.

Mulch applications in extremely clayey soils should be evaluated carefully to avoid developing an adobe mixture. In these cases, a soil amendment may be beneficial.

Noxious and Invasive Weed Control

Should noxious or invasive weeds be documented after earthwork and seeding activities, Hilcorp will follow SUIT and/or BLM requirements and instructions for weed treatments, including the period of

treatment, approved herbicides that may be used, required documentation to be submitted to the SUIT and/or BLM after treatment, and any other site-specific instructions that may be applicable.

III. MONITORING AND FINAL ABANDONMENT

Monitoring Plan

Monitoring will be completed according to SUIT and/or BLM requirements. Monitoring activities will be initiated after the project is completed, during the post-disturbance earthwork and seeding inspection process.

Final Abandonment

Upon final abandonment, Hilcorp will file for ROW Grant termination with the SUIT. Hilcorp would relinquish ROW Grants for the pipeline corridor. Surface disturbances within the ROW Grant areas will be returned to pre-disturbance conditions as practicable according to SUIT procedure.

References

43 CFR Part 3160, "Onshore Oil and Gas Order No. 1; Onshore Oil and Gas Operations; Federal and Indian Oil and Gas Leases; approval of Operations," 72 Federal Register 44 (march 2007), pp. 10328-10338.

U.S. Department of the Interior, U.S. Department of Agriculture (USDI, USDA). 2007. Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development. BLM/WO/ST-06/021+307/REV 07. Bureau of Land Management, Denver, Colorado. 84 pp.

Certification to Access Lands

I/We are aware that Hilcorp San Juan L.P. intends to drill, complete, produce, and eventually abandon a well into the Fruitland Coal formation (hereinafter, the "Well"). The well pad and access road leading to the Well will be located on lands owned by Robert W Austin Living Trust, Linda Austin Seykora Amended and Restated Trust, and Constance A Kuncicky Irrevocable Trust. Therefore, as requested by the Tres Rois BLM office, please consider this letter sufficient to fulfill the requirement as set forth in U.S. DOI BLM Permanent Instruction Memorandum No. 201-014 authorizing access to the Department of the Interior and its contractors to perform all necessary inspections, carry out plugging/abandonment procedures and address any unresolved liabilities pertain to the Well.

This instrument may be executed in counterparts, each of which shall be deemed an original, but all of which together constitute one and the same instrument.

IN WITNESS WHEREOF, the undersigned has caused this instrument to be executed effective as of the date set forth above.

By:
Robert W Austin Living Trust

Date

By:
Linda Austin Seykora Amended
and Restated Trust

Date

Christine M. Taylor Trustee 7-20-23

By:
Constance A Kuncicky Irrevocable Trust

Date

Certification to Access Lands

I/We are aware that Hilcorp San Juan L.P. intends to drill, complete, produce, and eventually abandon a well into the Fruitland Coal formation (hereinafter, the "Well"). The well pad and access road leading to the Well will be located on lands owned by Robert W Austin Living Trust, Linda Austin Seykora Amended and Restated Trust, and Constance A Kuncicky Irrevocable Trust. Therefore, as requested by the Tres Rois BLM office, please consider this letter sufficient to fulfill the requirement as set forth in U.S. DOI BLM Permanent Instruction Memorandum No. 2018-014 and 2015-124 authorizing access to the Department of the Interior and its contractors to perform all necessary inspections, carry out plugging/abandonment procedures, address any unresolved liabilities, and monitor production and measurement for the communitized area as it pertains to the Well.

This instrument may be executed in counterparts, each of which shall be deemed an original, but all of which together constitute one and the same instrument.

IN WITNESS WHEREOF, the undersigned has caused this instrument to be executed effective as of the date set forth above.

Jennifer Leanne Austin, Trustee 7/6/2023

By:
Robert W Austin Living Trust

Date

By:
Linda Austin Seykora Amended
and Restated Trust

Date

By:
Constance A Kuncicky Irrevocable Trust

Date

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By:
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By:
Linda Austin Seykora Amended
and Restated Trust

Date

By:
Constance A Kuncicky Irrevocable Trust

Date

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This instrument may be executed in counterparts, each of which shall be deemed an original, but all of which together constitute one and the same instrument.

IN WITNESS WHEREOF, the undersigned has caused this instrument to be executed effective as of the date set forth above.

By:
Robert W Austin Living Trust

Date

By:
Linda Austin Seykora Amended
and Restated Trust

Date

Christine M. Taylor Trustee 7-20-23

By:
Constance A Kuncicky Irrevocable Trust

Date

Hilcorp San Juan, L.P.
Southern Ute 705H
196' FNL & 477' FEL (Surface Location) in Secion 15,
840' FNL & 1025' FWL (Pilot Bottom Hole in Section 14,
1922' FNL & 716' FEL (Lateral No. 1 Bottom Hole) in Section 14,
798' FNL & 721' FEL (Lateral No. 2 Bottom Hole) in Section 14,
T-32-N, R-7-W, N.M.P.M., La Plata County, CO.



Looking North



Looking East



Looking South



Looking West



Access at Well Location



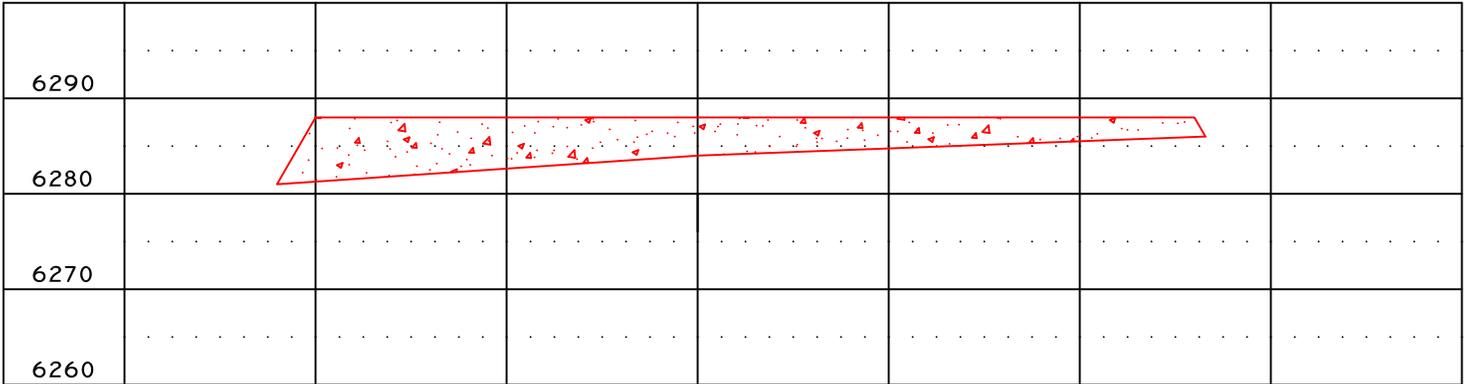
Access at Road

HILCORP SAN JUAN, L.P.

SOUTHERN UTE 705H – 196’ FNL & 477’ FEL (SURFACE) SEC. 15,
 840’ FNL & 1025’ FWL (PILOT BOTTOM HOLE) SECTION 14,
 1922’ FNL & 716’ FEL (LATERAL No. 1 BOTTOM HOLE) SECTION 14,
 798’ FNL & 721’ FEL (LATERAL No. 2 BOTTOM HOLE) SECTION 14,
 T-32-N, R-7-W, N.M.P.M., LA PLATA COUNTY, COLORADO
 GROUND ELEVATION: 6288.2 – DATE: JANUARY 30, 2014

ELEVATION
A-A'

⊘



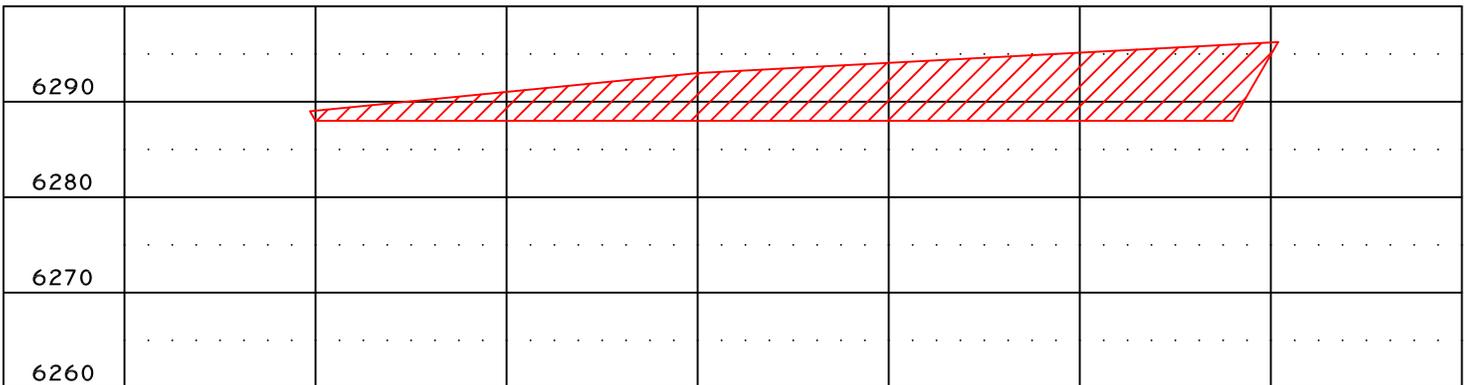
B-B'

⊘



C-C'

⊘



1" = 50' – HORIZONTAL
 1" = 20' – VERTICAL

NOTES:

- 1.) CONTRACTOR SHALL CONTACT "ONE-CALL" FOR LOCATION OF ANY MARKED OR UNMARKED BURIED PIPELINES OR CABLES ON WELLPAD AND/OR ACCESS ROAD AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION.
- 2.) UNITED FIELD SERVICES, INC. IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES.



P.O. BOX 3651
 FARMINGTON, NM 87499
 OFFICE: (505) 334-0408

DWG. NO. : 11736C01		REVISION: 1
DRAWN BY: K.S.	DATE DRAWN: 01/27/23	REV. DATE:
SURVEYED: 01/30/14	APP. BY: J.A.V.	

SHEET F



Surface Use Plan of Operations for Southern Ute 705H

The following is required information concerning the possible effect, which the Southern Ute 705H project may have on the environment, existing road sites, and surrounding acreage. A copy will be posted on the derrick floor so all contractors and sub-contractors will be aware of all items on this plan.

Infrastructure proposed to be constructed, operated, subsequently interim reclaimed, and eventually fully reclaimed as part of the Southern Ute 705H project entails one (1) well pad with production facilities and construction buffer zone, one (1) access road, and one (1) gas pipeline. The proposed project would be built on both fee and tribal surface and will access fee and tribal minerals. The Southern Ute 705H well pad is on fee surface. The pipeline to take gas from the Southern Ute 705H and access road to and from the Southern Ute 705H well is on both SUIT tribal fee lands and lands owned by the Mary S. Austin Estate. The Southern Ute 705H well would be horizontally drilled, possibly produced, and eventually plugged and abandoned from the proposed well pad location. The proposed well would access Tribal minerals in lease number 14-20-151-6.

Surface Hole Location: 196' FNL & 477' FEL,
Unit Letter A (NENE) Sec. 15, T32N, R7W
La Plata County, Colorado

First Take Point: 840' FNL & 1025' FWL
UL D (NWNW), Sec. 14, T32N, R7W
La Plata County, Colorado

End of Lateral 1: 1922' FNL & 716' FEL
UL H (SENE) Sec. 14, T32N, R7W
La Plata County, Colorado

End of Lateral 2: 798' FNL & 721' FEL
UL A (NENE) Sec. 14, T32N, R7W
La Plata County, Colorado

Table of Contents

- 1) Existing Roads
- 2) New or Reconstructed Roads
- 3) Location of Existing Wells
- 4) Location of Existing or Proposed Production Facilities
- 5) Locations and Types of Water Supply
- 6) Construction Materials
- 7) Methods for Handling Waste
- 8) Ancillary Facilities
- 9) Well Site Layout

Sheet A1 & Sheet A2 – Well Plats

Sheet B1 – Topo Map depicting Well Site and Resource Road

Sheet B2 – Access Road Description

Sheet B3 – Access Road with Culvert Placement

Sheet C – Directions to Site

Sheet D1 - Gas Wells in Vicinity

Sheet D2- Water Wells in Vicinity

Sheet E – Proposed Pipeline Survey

Sheet F – Proposed Well Site Profile

Sheet G1 – Proposed Well Site

Sheet G2 – Proposed Well Site - Contour Layout

Sheet G3 – Proposed Well Site Rig Layout Diagram

Sheet H – Water Source Map

Sheet I – Surface Pictures Before Disturbance

Sheet J – Existing Road Improvements

Sheet K – Surface Use Letter Agreement

Appendix A – Revegetation Plan

Appendix B – Road Maintenance Plan

1) Existing Roads

- a. Existing State and County roads are shown on **Sheet B1**.
- b. Directions to the Site are provided on **Sheet C**.
- c. The existing State and County roads adjacent to the proposed well pad will be used to supply the location during operations. These existing roads are categorized as resource roads.
- d. Roads will be maintained in same or better condition as they existed prior to the commencement of operations and said maintenance will continue until final abandonment and reclamation of the well location. Maintenance would continue until final abandonment and reclamation of the well location (See **Appendix B**).
- e. Dust emissions will be controlled on the roads and location, as necessary, with the application of dust suppressants and/or water. Dust control will be implemented when dust plumes become larger than normal road use conditions or when directed by the BLM or SUIT Authorized Officer.
- f. Hilcorp has committed to upgrading a section of the access road as shown on **Sheet J**. A total of 6786' of existing roadway will be upgraded by adding 3" minus road base after twelve new culverts are installed at the locations indicated on **Sheet J**. No new topsoil will be needed to upgrade this section of road. Any soil removed from the existing roadway that is not needed during the upgrade will be incorporated into shoulder that is adjacent to and parallel with the bar-ditch.

2) New or Reconstructed Roads

- a. The resource road and well pad will be designed and constructed in accordance with the BLM Gold Book Standards and BLM 9113-1 (Roads Design Handbook) and BLM 9113-2 (Roads National Inventory and Condition Assessment Guidance and Instructions Handbook). Construction may include ditches, drainage, culverts, traffic turnouts, crowning and capping or sloping and dipping the roadbed to provide a well-constructed and safe road and well pad. **Appendix B** is the Road Maintenance Plan for new and reconstructed access roads and outlines the plan for road inspections, new road design and maintenance procedures.
- b. The proposed road to the well pad was identified as a resource road.
- c. The new resource road will be constructed per route identified on **Sheets B1, B2 and B3** of which 78.63 feet is on fee lands.
- d. Maximum width will be 30-foot overall right-of-way with a 14-foot road running surface. During drilling and subsequent operations, all equipment and vehicles will be confined to the 14-foot driving surface.

- e. There will be one 24" x 30' culvert on the new access road (**See Sheet B3**).
- f. Topsoil removal, storage, and protection are described in detail in the Surface Reclamation Plan.
- g. No construction or routine maintenance activities would be performed during periods when the soil is too wet to adequately support construction equipment. If equipment creates ruts deeper than six inches (6"), the soil would be deemed too wet for construction or maintenance.
- h. Hilcorp will be responsible for road maintenance from the beginning of construction to completion of operations and the well is plugged and abandoned. See attached Road Maintenance Plan (**Appendix B**).
- i. Dust emissions will be controlled on the roads and locations, related to Hilcorp activity, with the application of dust suppressants and/or water. Dust control will be implemented when dust plumes become larger than normal road use conditions or when directed by the BLM or SUIT Authorized Officer.
- j. The proposed resource road will not be constructed to all weather standards prior to drilling and completing the proposed well. If the well proves to require year-round traffic due to increased production, Hilcorp will schedule a meeting with the BLM and SUIT to discuss which portions of the roads (proposed resource road and existing resource roads) may require upgrades and/or surfacing to prevent soil erosion.
- k. The following Best Management Practices will be implemented:
 - i. Drainage and ditch design; will line ditches with rock around corners and slopes.
 - ii. Hilcorp has committed to upgrading a section of the access road. **See Sheet J** for details of the upgrades and a map depicting the upgraded area.

3) Location of Existing Wells

Water wells and oil and gas wells (plugged and abandoned, active, and proposed) within a 1-mile radius of the proposed Southern Ute 705H area are depicted in **Sheet D1 and D2**. There are 14 water wells and 29 oil and gas wells (plugged and abandoned, active, or proposed) within a 1-mile radius of the proposed well pad location.

- a. Adjacent producing and plugged and abandon oil and gas wells are shown on **Sheet D1**.
- b. Adjacent water wells are shown on **Sheet D2**.

4) Location of Existing and/or Proposed Production Facilities

Hilcorp elects to defer providing the BLM with the well layout of production equipment (site security diagram) per Onshore Order 1 Section VIII. Hilcorp will provide the well layout of production equipment using the Notice of Intent (NOI) once the post completion facility set onsite has been conducted with the BLM's Environmental Protection Staff. The site security diagram will be provided after the well has been completed and facilities have been set. The typical well producing into this formation has the following production facilities.

- i. Two 80 BBL Produced Water Tanks
 - ii. Separator
 - iii. Production pit
 - iv. Pumping unit
 - v. Meter House
 - vi. Compressor
- b. Harvest will be the gas transporter for this well. A 4-1/2" OD buried steel pipeline that is approx. 7287' in length of on Southern Ute Tribal Fee and 2436' on lands owned by the Mary S. Austin Estate. Harvest has applied for right-of-way with the Southern Ute Tribe for this right-of-way. Please refer to **Sheet E** for additional information on the pipeline.
- c. Any production equipment encompassed by a dirt berm or one in which fluids are present shall be adequately fenced and properly maintained in order to safeguard both livestock and wildlife.

5) Location and Types of Water Supply

- a. Water would be trucked from these sources to the proposed location (**Appendix H**).
 - i. Ignacio Water Shed - northwest ¼ of Section 20 Township 33 North, Range 7 West, Permit Number (SJ-206)
 - ii. Self-water hole- northeast ¼ Section 7 Township 32 North, Range 6 West, Permit Number (SD 02964 2A)
 - iii. Faverino water hole- northwest ¼ of Section 7 Township 32 North, Range 6 West, Permit Number (SJ-17)

6) Construction Material and Methods

- a. Construction material will be obtained from the location site; any additional fill dirt that would be used during construction for the berms around production tanks and for the padding for pipe as well as the gravel to use on the berms and around production facilities will come from one of the companies listed below. The

construction material that will be brought in could be ¾-inch rock or ¾-inch road base and clean fill dirt.

- Sky Ute Sand and Gravel
 - Crossfire Aggregate Services
 - La Boca Gravel Pit
 - Permitted BLM Sandstone Pits for Road Surface Material
- b. Any trees larger than 3-inches in diameter will be cut within 12” of ground level and delimbed. Wood permits will be obtained from the SUT. Wood will be cut and hauled to the Southern Ute wood yard. Stumps will be cut as close to the ground as possible. Stumps and root balls will be hauled off or ground up and then put in the fill. Any trees smaller than 3-inches in diameter with slash and brush will be chipped, shredded or mulched and incorporated into the topsoil for later use in interim reclamation. Remaining brush will be brush-hogged or scalped at ground-level prior to ground disturbance.
- c. After removal of vegetation, topsoil will be segregated and windrowed along the edge of the resource road and stockpiled within the TUA and construction zone as indicated on **Sheets G1 and G2**. Topsoil will be defined as the top six (6) inches of soil. The stockpile topsoil will be free of brush and tree limbs, trunks and root balls, but may include chipped or mulched material so long as it is incorporated into the topsoil stockpile.
- i. Topsoil will not be stripped when soils are moisture-saturated or frozen below the stripping depth.
 - ii. Topsoil stacked and waddles will be placed around the base of the topsoil. Vehicle/equipment traffic will be prevented from crossing topsoil stockpiles.
 - iii. If the well pad becomes prone to wind or water erosion, Hilcorp will take appropriate measures to prevent topsoil loss from wind. Such measures may include using tackifiers or water to wet the topsoil stockpile so that a crust is created across the exposed soil to prevent soil loss.
- d. For well pad cut and fill see **Sheet F**.
- e. The following best Management practices will be implemented.
- i. Line ditches with rock as needed to avoid erosion.
 - ii. Topsoil will be stacked and waddles will be placed around the base of the topsoil pile.
 - iii. Use waddles as needed around fill slopes.
 - iv. Utilize a closed loop system during drilling and completion.

- v. Subsoil will be used as needed for fill material.
- f. Construction equipment may include chain saws, brush hog, scraper, maintainer, excavator, hydraulic mulcher, chipper and dozer. Construction of the resource road and well pad will take approximately 2 to 4 weeks.
- g. Construction contractors will utilize the Colorado 811 system to identify the location of any marked or unmarked pipelines or cables located in the proximity of the proposed resource road and well pad at least two working days prior to ground disturbance.
- h. All operations will be conducted in such a manner that full compliance is made with the applicable laws and regulations, the Application to Permit to Drill (APD), and applicable Notice (s) to Lessees.

Methods for Handling Waste

The Southern Ute 705H Project horizontal natural gas well will be drilled, and waste handled by the methods outlined below.

- i. Cuttings
 - i. Drilling operations would utilize a closed-loop system. Drilling of the horizontal lateral would be accomplished with water-based mud. All cuttings would be placed in roll-off bins and hauled to a commercial disposal facility or land farm. Hilcorp would follow Onshore Oil and Gas Order No. 1 regarding the placement, operation, and removal of closed-loop systems. No blow pit would be used.
 - ii. Closed-loop tanks would be adequately sized for containment of all fluids.
- j. Drilling Fluids
 - i. Drilling fluids would be stored onsite in above-ground storage tanks. Upon termination of drilling operations, the drilling fluids would be recycled and transferred to other permitted closed-loop systems or disposed of at one of the locations specified below in part G.
- k. Spills
 - i. Any spills of non-freshwater fluids would be immediately cleaned up and removed to an approved disposal site.

- l. Sewage
 - i. Portable toilets would be provided and maintained as needed during construction.
- m. Garbage and other waste material
 - i. All garbage and trash would be placed in an enclosed metal trash containment. The trash and garbage would be hauled off site and dumped in an approved landfill, as needed.
- n. Hazardous Waste
 - i. No chemicals subject to reporting under Superfund Amendments and Reauthorization Act Title III in an amount equal to or greater than 10,000 pounds would be used, produced, stored, transported, or disposed of annually in association with the drilling, testing, or completing of these wells.
 - ii. No extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities would be used, produced, stored, transported, or disposed of annually in association with the drilling, testing, or completing of these wells.
 - iii. All fluids (i.e., scrubber cleaners) used during washing of production equipment would be properly disposed of to avoid ground contamination or hazard to livestock or wildlife.
- o. Produced Water
 - i. Hilcorp would dispose of produced water from the Southern Ute 705H Project well at the following facility:
 - 1. San Juan 32-7 Unit 301 SWD, API 30-045-28549, operated by Hilcorp Energy Company, located in the Southwest ¼ of the Southwest ¼ Section 34, Township 32 North, Range 7 West.
 - ii. Produced water would be transported via trucking. Some produced water may also be used in future drilling and completion operations as an alternative disposal method.

7) Ancillary Facilities

Any existing Hilcorp locations may be used for staging during construction, drilling, and completion operations. Standard drilling operation equipment that will be on location includes

drilling rig with associated equipment, temporary trailers equipped with sleeping quarters necessary for company personnel, toilet facilities, and trash containers.

8) Well Site Layout for Drilling and Completion

- a. The proposed drill pad layout is shown on **Sheet G1 and G2 and Sheet G3 (rig layout)**. Cross sections have been drafted to visualize the planned cuts and fill across the location – see **Sheet F**. Refer to Section 6 for construction materials and methods.
- b. Office trailers equipped with living quarters will be provided on location during drilling and completion operations.

9) Plans for Surface Restoration.

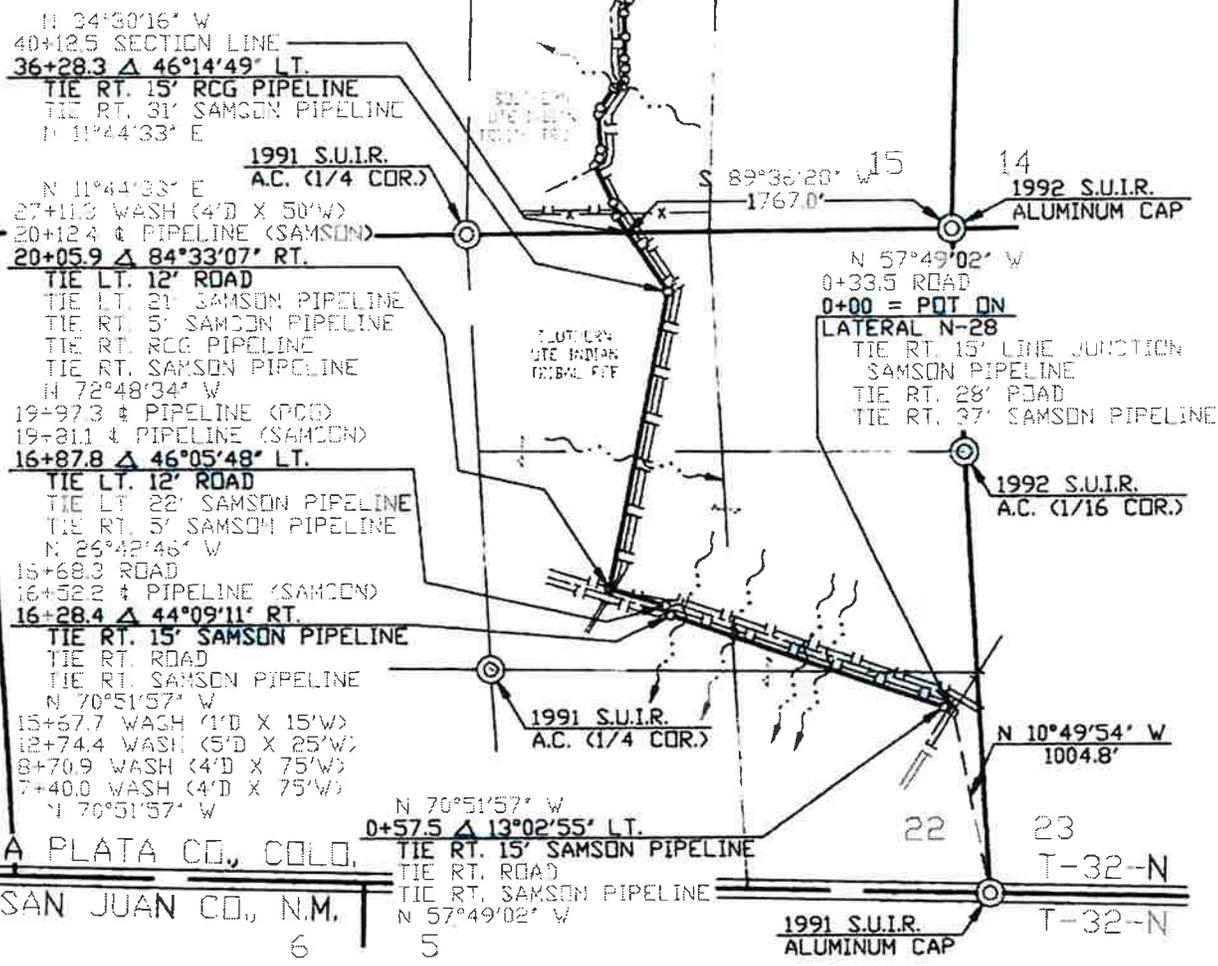
- a. During reclamation activities, Seed Mix 1 has been selected from the Southern Ute seed mixes, see **Appendix A** for detailed reclamation.
- b. See **Appendix A** for details of interim and final reclamation.

10) Other Information.

- a. Construction contractors would call Colorado One-Call (or equivalent) to identify the location of any marked or unmarked pipelines or cables located in proximity to the proposed Southern Ute 705H Project or any other areas proposed to have ground disturbance at least two working days prior to ground disturbance.
- b. The cultural survey report was submitted to the appropriate surface managing agencies. Cultural mitigation would occur if any is listed in the approved APD.
- c. All activities associated with the construction, use/operation, maintenance, and abandonment or termination of the Southern Ute 705H Project well would be limited to areas approved in the APD(s).

WELL PLAT
FOOTAGES:
195' FNL
477' FEL
DATE: 10/04

NOTES: BEARINGS ARE BASED ON THE COLORADO COORDINATE SYSTEM, SOUTH ZONE, NAD 83, ALONG THE SOUTH LINE OF THE S. 1/4 OF SECTION 15, T-32-N, R-7-W, NMPN BEARS S 89°36'28" W - 2641.0'



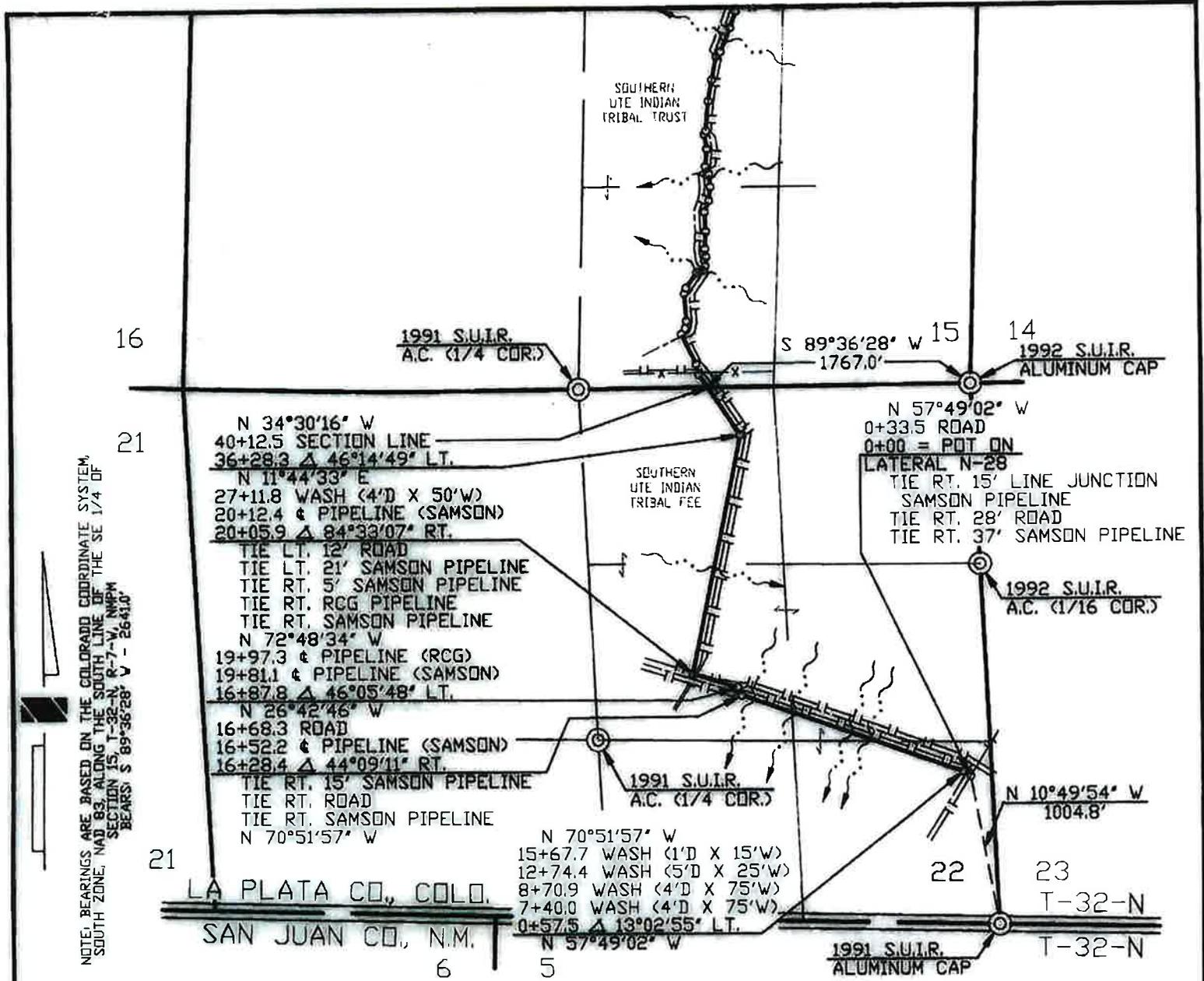
LA PLATA CO., COLO.
SAN JUAN CO., N.M.

PRELIMINARY
DRAWING

PIPE DATA

SUBDIVISION		OWNER		FEET	MOES	ACRES	PODS	ROW WIDTH					
0+00 TO 40+12.5		SOUTHERN UTE INDIAN TRIBAL FEE		4012.5	0.760	3.685	243.192	40'					
REVISION NO.	DATE	BY	DESCRIPTION	W.D.NO.	CHK.	APP.	NO.	DATE	BY	DESCRIPTION	W.D.NO.	CHK.	APP.
4	12/20/13	KS	REVISED ALIGNMENT	W001154137	MW		6	08/14/14	MW	REVISED OWNERSHIP	W001154137	MW	
3	10/16/09	MB	UPDATED REFERENCE DWG. NUMBER		PB		5	03/13/14	MW	LINE CHANGE (03/13/14)	W001154137	MW	

INFO		DRAFTING	BY	DATE	STATE: COLORADO		COUNTY: LA PLATA		HARVEST FOUR CORNERS			
R/W #:	07147	DRAWN BY	LB	05/02/08	SAN JUAN GATHERING SYSTEM BRDG - SOUTHERN UTE #705H (REF DWG. 28N765.0-1) SEC. 22, T-32-N, R-7-W, NMPN 0+00 = POT ON LATERAL N-28				DWG NO. 28N765.0-21-1		SHEET	REV
NWC #:		CHECKED BY	PE	05/05/08							1	6
METER #:		APPROVED BY									OF	
SURVEYED:	04/16/08	ENGINEER	BY	DATE	SCALE: 1" = 1000'	W.D. NO. W001154137				5		
		DESIGNED BY										
		PROJ. APPROVED										

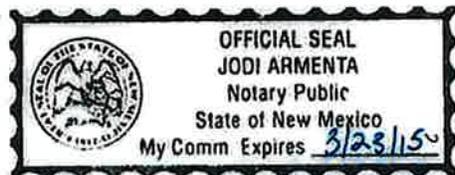


NOTE: BEARINGS ARE BASED ON THE COLORADO COORDINATE SYSTEM, SOUTH ZONE, NAD 83, ALONG THE SOUTH LINE OF THE SE 1/4 OF SECTION 15, T-32-N, R-7-W, NMPM BEARS, S 89°36'28" W - 2641.0'

WIDTH OF RIGHT OF WAY 40' MILES OF TRIBAL LAND 0.760 RIGHT OF WAY IN ACRES 3.685

LOUIS P. CHAVEZ BEING DULY SWORN, STATES THAT HE IS SURVEY COORDINATOR OF WELL CONNECTS OF WILLIAMS FOUR CORNERS, LLC, HEREINAFTER DESIGNATED THE "APPLICANT". THAT THE SURVEY OF A RIGHT OF WAY ALIGNMENT FROM ENGINEERING STATION 0+00 TO ENGINEERING STATION 40+12.5, A DISTANCE OF 0.760 MILES, WAS MADE UNDER HIS DIRECTION AS SURVEY COORDINATOR OF WELL CONNECTS OF THE APPLICANT AND UNDER ITS AUTHORITY COMMENCING ON APRIL 16, 2008 AND ENDING ON MARCH 13, 2014 AND THAT SUCH SURVEY ALIGNMENT IS ACCURATELY REPRESENTED ON THIS DRAWING.

SWORN AND SUBSCRIBED Jodi Armenta
27 DAY OF August 20 14
 NOTARY PUBLIC, SAN JUAN COUNTY, NEW MEXICO
 MY COMMISSION EXPIRES, 3/23/15



[Signature]
 SURVEY COORDINATOR
 WILLIAMS FOUR CORNERS, LLC

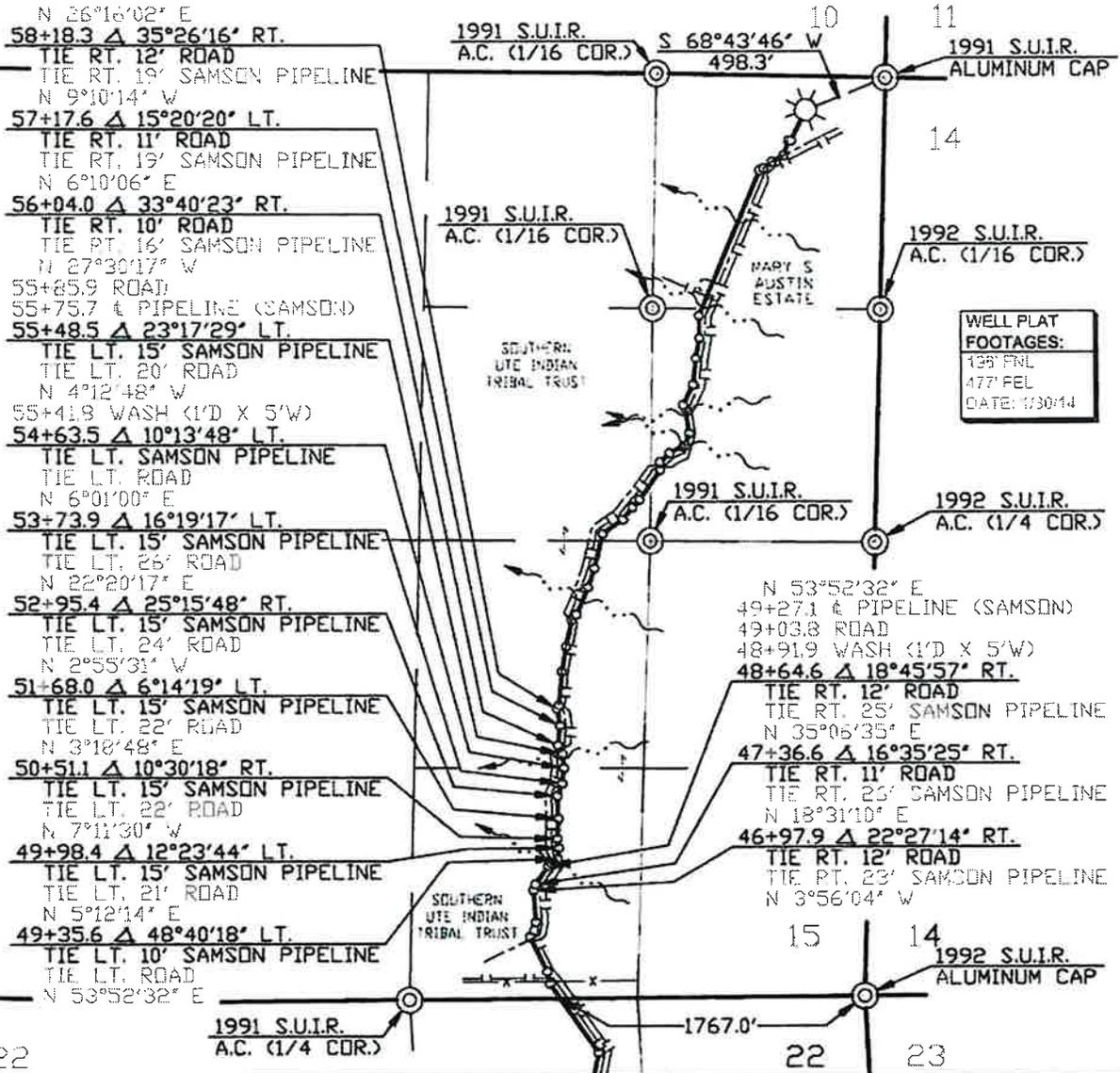
I PEGGY McWILLIAMS, DO HEREBY CERTIFY THAT I AM A RIGHT OF WAY AGENT FOR WILLIAMS FOUR CORNERS, LLC, HEREINAFTER DESIGNATED THE "APPLICANT", THAT LOUIS P. CHAVEZ WHO SUBSCRIBED THE ACCOMPANYING AFFIDAVIT IS THE SURVEY COORDINATOR OF WELL CONNECTS OF THE APPLICANT; THAT THE SURVEY OF THE RIGHT OF WAY ALIGNMENT AS REPRESENTED ON THIS DRAWING WAS MADE UNDER THE AUTHORITY OF THE APPLICANT AND HAS BEEN DETERMINED TO THE DEFINITE LOCATION OF THE RIGHT OF WAY, FROM ENGINEERING STATION 0+00 TO ENGINEERING STATION 40+12.5, A DISTANCE OF 0.760 MILES, THAT THE DRAWING HAS BEEN PREPARED TO BE FILED FOR THE APPROVAL OF THE SUPERINTENDENT IN ORDER THAT THE APPLICANT MAY OBTAIN THE BENEFITS OF THE ACT OF CONGRESS APPROVED FEBRUARY 5TH, 1948 (62 STAT. 17 25USC 323).

Peggy McWilliams
 RIGHT OF WAY AGENT
 WILLIAMS FOUR CORNERS, LLC

NO.	DATE	BY	DESCRIPTION	V.O.N.O.	CHK.	APP.	NO.	DATE	BY	DESCRIPTION	V.O.N.O.	CHK.	APP.
4	12/20/13	KS	REVISED ALIGNMENT	WDC1154137	MW		6	08/14/14	MW	REVISED OWNERSHIP	WDC1154137	MW	
3	10/16/09	MB	UPDATED REFERENCE DWG. NUMBER		PB		5	03/13/14	MW	LINE CHANGE (03/13/14)	WDC1154137	MW	

INFO		DRAFTING	BY	DATE	STATE: COLORADO	HARVEST FOUR CORNERS	
R/W #:	07147	DRAWN BY	LB	05/02/08	COUNTY: LA PLATA		
REFERENCE DRAWING		CHECKED BY	PB	05/05/08	SAN JUAN GATHERING SYSTEM APPLICATION FOR RIGHT-OF-WAY ACROSS SOUTHERN UTE TRIBAL FEE LANDS SOUTHERN UTE #705H SECTION 22, T-32-N, R-7-W, NMPM		
28N765.0-21-1		APPROVED BY					
		ENGINEER	BY	DATE	SCALE: 1"=1000'	DWG NO.	765.4-X-2000
		DESIGNED BY			W.O. NO. WDC1154137	SHEET E	
		PROJ. APPROVED				SHEET 1 OF 1	REV 6

NOTE: BEARINGS ARE BASED ON THE COLORADO COORDINATE SYSTEM, SOUTH ZONE, NAD 83, ALONG THE SOUTH LINE OF SECTION 15, T-32-N, R-7-W, NMPM BEARS: S 89°36'28" W - 2641.0'



WELL PLAT FOOTAGES:
136' PNL
477' FEL
DATE: 1/30/14

PRELIMINARY DRAWING

PIPE DATA

SUBDIVISION		OWNER		FEET	MILES	ACRES	RODS	ROW WIDTH
46+97.9 TO 58+18.3		SOUTHERN UTE INDIAN TRIBAL TRUST		1120.4	0.212	1.029	67.903	40'

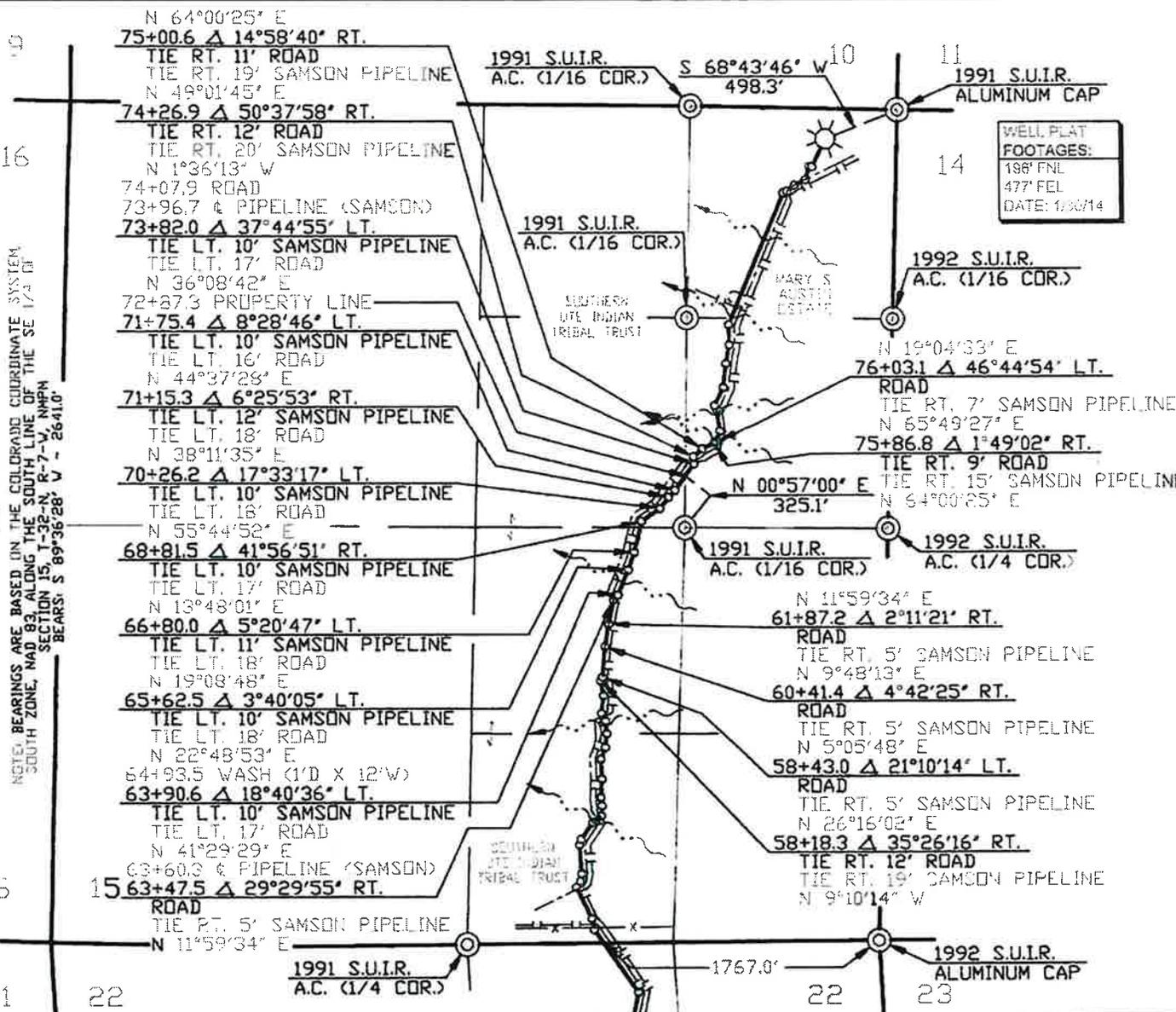
NO.	DATE	BY	DESCRIPTION	W.D.N.O.	CHK.	APP.	NO.	DATE	BY	DESCRIPTION	W.D.N.O.	CHK.	APP.
4	12/20/13	KS	REVISED ALIGNMENT	WDC1154137	HW		6	08/14/14	MW	REVISED OWNERSHIP	WDC1154137	MW	
3	12/16/09	MB	UPDATED REFERENCE DWG. NUMBER		PB		5	03/13/14	MW	LINE CHANGE (03/13/14)	WDC1154137	MW	

INFO				DRAFTING				BY				DATE				STATE: COLORADO			
R/W #:	07147			DRAWN BY	LB			05/02/08				COUNTY: LA PLATA				HARVEST FOUR CORNERS SAN JUAN GATHERING SYSTEM BROG - SOUTHERN UTE #705H (REF DWG. 28N765.0-1) SEC. 15, T-32-N, R-7-W, NMPM 0+00 = POT ON LATERAL N-28			
NWC #:				CHECKED BY	PB			05/05/08											
METER #:				APPROVED BY															
SURVEYED:	04/16/08			ENGINEER				BY DATE				SCALE: 1" = 1000'							
				DESIGNED BY								W.D. NO. WDC1154137							
				PROJ. APPROVED								DWG NO. 28N765.0-21-3							

SHEET 3 OF 5 REV 6

SHEET E

NOTE: BEARINGS ARE BASED ON THE COLORADO COORDINATE SYSTEM, SOUTH ZONE, NAD 83, ALONG THE SOUTH LINE OF THE SE 1/4 OF SECTION 15, T-32-N, R-7-W, NMPM BEARS, S 89°36'28" W - 2641.0'



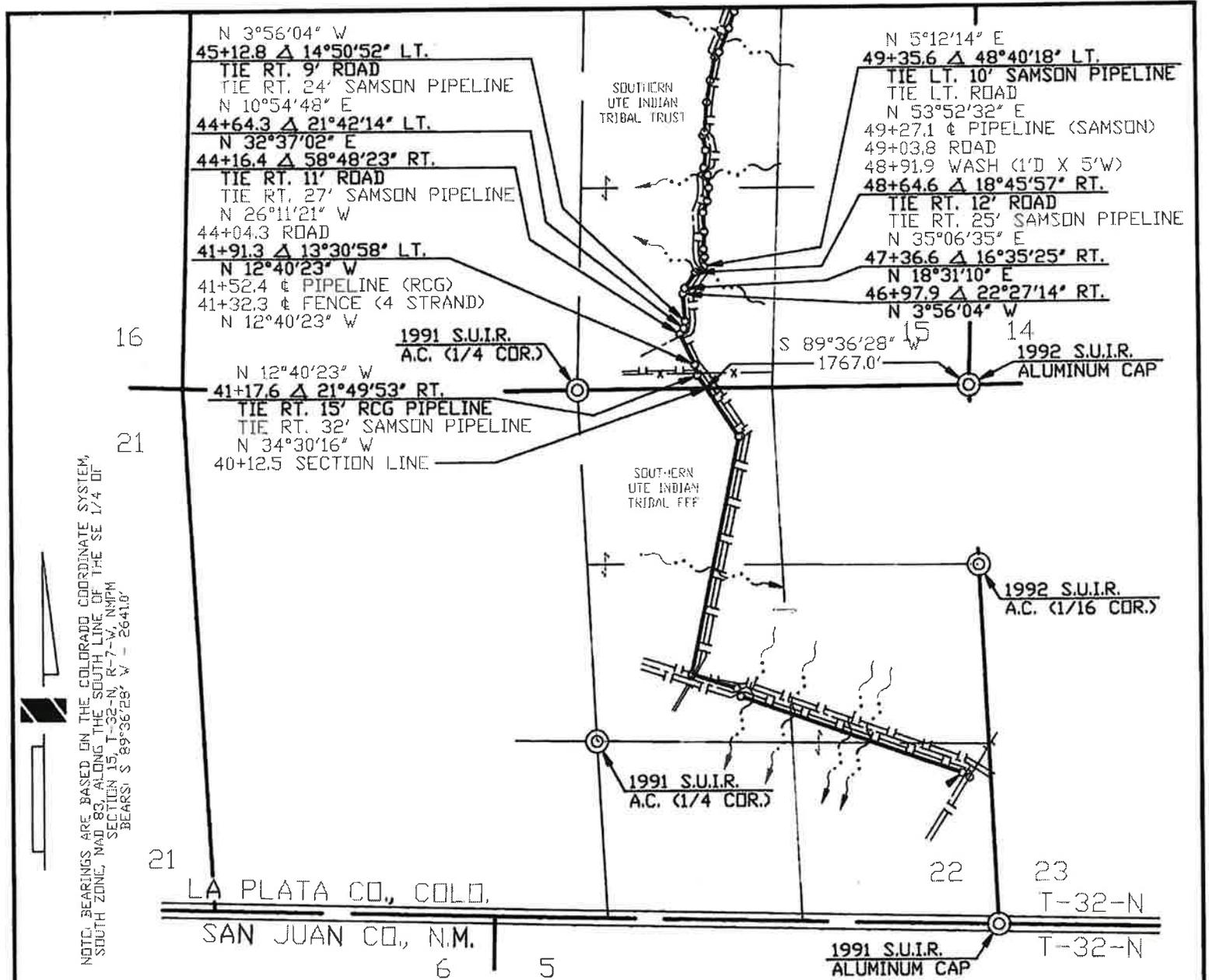
PRELIMINARY DRAWING

PIPE DATA

OWNER/SHIP	SUBDIVISION	OWNER	FEET	MILES	ACRES	RODS	R.O.W. WIDTH
	58+18.3 TO 72+87.3	SOUTHERN UTE INDIAN TRIBAL TRUST	1469.0	0.276	1.349	89.030	40'
	72+87.3 TO 76+03.1	MARY S. AUSTIN ESTATE	315.8	0.060	0.290	19.139	40'

REVISION	NO.	DATE	BY	DESCRIPTION	W.D.NG.	CHK.	APP.	NO.	DATE	BY	DESCRIPTION	W.D.NG.	CHK.	APP.
	4	12/20/13	KS	REVISED ALIGNMENT	WDC1154137			6	08/14/14	MW	REVISED OWNERSHIP	WDC1154137		
	3	10/16/09	MB	UPDATED REFERENCE DWG. NUMBER		PB		5	03/13/14	MW	LINE CHANGE (03/13/14)	WDC1154137		

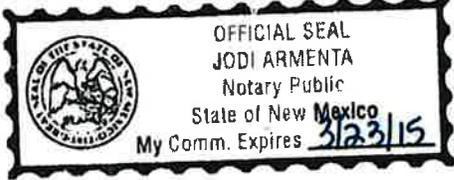
INFO		DRAFTING	BY	DATE	STATE: COLORADO		COUNTY: LA PLATA		HARVEST FOUR CORNERS					
P/W #:	07147	BRAWN BY	LT	05/02/08					SAN JUAN GATHERING SYSTEM BRDG - SOUTHERN UTE #705H (REF DWG. 28N765.0-1) SEC. 15, T-32-N, R-7-W, NMPM 0+00 = POT ON LATERAL N-28					
NWC #:		CHECKED BY	PB	05/05/08										
METER #:		APPROVED BY												
SURVEYED:	04/16/08	ENGINEER	BY	DATE					SCALE: 1" = 1000'		DWG NO. 28N765.0-21-4		SHEET 4 OF 5	REV 6
		DESIGNED BY							W.D. NO. WDC1154137					
		PROJ. APPROVED												



WIDTH OF RIGHT OF WAY 40' MILES OF TRIBAL LAND 0.175 RIGHT OF WAY IN ACRES 0.848

LOUIS P. CHAVEZ BEING DULY SWORN, STATES THAT HE IS SURVEY COORDINATOR OF WELL CONNECTS OF WILLIAMS FOUR CORNERS, LLC, HEREINAFTER DESIGNATED THE "APPLICANT". THAT THE SURVEY OF A RIGHT OF WAY ALIGNMENT FROM ENGINEERING STATION 40+12.5 TO ENGINEERING STATION 49+35.6, A DISTANCE OF 0.175 MILES, WAS MADE UNDER HIS DIRECTION AS SURVEY COORDINATOR OF WELL CONNECTS OF THE APPLICANT AND UNDER IT'S AUTHORITY COMMENCING ON APRIL 16, 2008 AND ENDING ON MARCH 13, 2014 AND THAT SUCH SURVEY ALIGNMENT IS ACCURATELY REPRESENTED ON THIS DRAWING.

SWORN AND SUBSCRIBED Jodi Armenta
27 DAY OF August 20 14
 NOTARY PUBLIC, SAN JUAN COUNTY, NEW MEXICO
 MY COMMISSION EXPIRES, 3/23/15



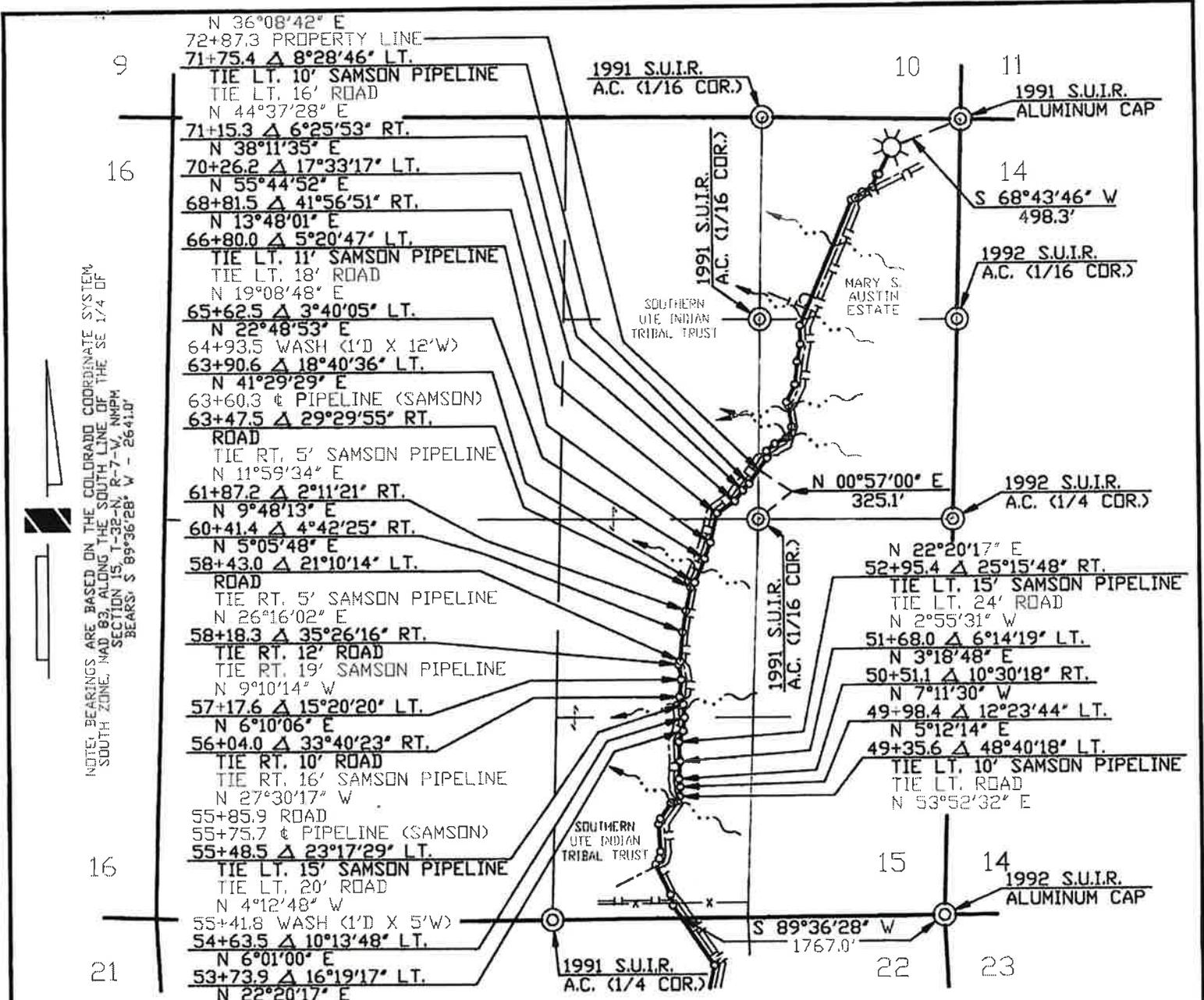
[Signature]
 SURVEY COORDINATOR
 WILLIAMS FOUR CORNERS, LLC

I PEGGY McWILLIAMS, DO HEREBY CERTIFY THAT I AM A RIGHT OF WAY AGENT FOR WILLIAMS FOUR CORNERS, LLC, HEREINAFTER DESIGNATED THE "APPLICANT", THAT LOUIS P. CHAVEZ WHO SUBSCRIBED THE ACCOMPANYING AFFIDAVIT IS THE SURVEY COORDINATOR OF WELL CONNECTS OF THE APPLICANT; THAT THE SURVEY OF THE RIGHT OF WAY ALIGNMENT AS REPRESENTED ON THIS DRAWING WAS MADE UNDER THE AUTHORITY OF THE APPLICANT AND HAS BEEN DETERMINED TO THE DEFINITE LOCATION OF THE RIGHT OF WAY, FROM ENGINEERING STATION 40+12.5 TO ENGINEERING STATION 49+36.5, A DISTANCE OF 0.175 MILES, THAT THE DRAWING HAS BEEN PREPARED TO BE FILED FOR THE APPROVAL OF THE SUPERINTENDENT IN ORDER THAT THE APPLICANT MAY OBTAIN THE BENEFITS OF THE ACT OF CONGRESS APPROVED FEBRUARY 5TH, 1948 (62 STAT. 17 25USC 323).

[Signature]
 RIGHT OF WAY AGENT
 WILLIAMS FOUR CORNERS, LLC

REVISION NO.	DATE	BY	DESCRIPTION	W.D.NO.	CHK.	APP.	NO.	DATE	BY	DESCRIPTION	W.D.NO.	CHK.	APP.
4	12/20/13	KS	REVISED ALIGNMENT	VDC1154137	MW		6	08/14/14	MW	REVISED OWNERSHIP	VDC1154137	MW	
3	10/16/09	MB	UPDATED REFERENCE DWG. NUMBER		PB		5	03/13/14	MW	LINE CHANGE (03/13/14)	VDC1154137	MW	

INFO				DRAFTING		BY		DATE		STATE: COLORADO		COUNTY: LA PLATA		HARVEST FOUR CORNERS											
R/W #:	07147	DRAWN BY:	LB	05/02/08	SAN JUAN GATHERING SYSTEM APPLICATION FOR RIGHT-OF-WAY ACROSS SOUTHERN UTE TRIBAL TRUST LANDS SOUTHERN UTE #705H SECTION 15, T-32-N, R-7-W, NMPM								SCALE:	1"=1000'	DWG NO.	765.4-X-2001	SHEET	1	REV	6					
REFERENCE DRAWINGS	28N765.0-21-2 & 28N765.0-21-3	CHECKED BY:	PB	05/05/08									W.D., NO.	VDC1154137											
		APPROVED BY:																							
		ENGINEER																							
		DESIGNED BY:																							
		PROJ. APPROVED:																							

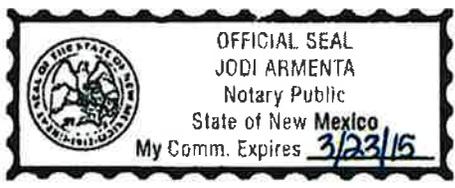


NOTES: BEARINGS ARE BASED ON THE COLORADO COORDINATE SYSTEM, SOUTH ZONE, MAD 83, ALONG THE SOUTH LINE OF THE SE 1/4 OF SECTION 15, T-32-N, R-7-W, NMPM BEARS: S 89°36'28" W - 2641.0'.

WIDTH OF RIGHT OF WAY 40' MILES OF TRIBAL LAND 0.445 RIGHT OF WAY IN ACRES 2.160

LOUIS P. CHAVEZ BEING DULY SWORN, STATES THAT HE IS SURVEY COORDINATOR OF WELL CONNECTS OF WILLIAMS FOUR CORNERS, LLC, HEREINAFTER DESIGNATED THE "APPLICANT". THAT THE SURVEY OF A RIGHT OF WAY ALIGNMENT FROM ENGINEERING STATION 49+35.6 TO ENGINEERING STATION 72+87.3, A DISTANCE OF 0.445 MILES, WAS MADE UNDER HIS DIRECTION AS SURVEY COORDINATOR OF WELL CONNECTS OF THE APPLICANT AND UNDER IT'S AUTHORITY COMMENCING ON APRIL 16, 2008 AND ENDING ON MARCH 13, 2014 AND THAT SUCH SURVEY ALIGNMENT IS ACCURATELY REPRESENTED ON THIS DRAWING.

SWORN AND SUBSCRIBED Jodi Armenta
29 DAY OF August 20 14
 NOTARY PUBLIC, SAN JUAN COUNTY, NEW MEXICO
 MY COMMISSION EXPIRES, 3/23/15



[Signature]
 SURVEY COORDINATOR
 WILLIAMS FOUR CORNERS, LLC

I PEGGY McWILLIAMS, DO HEREBY CERTIFY THAT I AM A RIGHT OF WAY AGENT FOR WILLIAMS FOUR CORNERS, LLC, HEREINAFTER DESIGNATED THE "APPLICANT", THAT LOUIS P. CHAVEZ WHO SUBSCRIBED THE ACCOMPANYING AFFIDAVIT IS THE SURVEY COORDINATOR OF WELL CONNECTS OF THE APPLICANT; THAT THE SURVEY OF THE RIGHT OF WAY ALIGNMENT AS REPRESENTED ON THIS DRAWING WAS MADE UNDER THE AUTHORITY OF THE APPLICANT AND HAS BEEN DETERMINED TO THE DEFINITE LOCATION OF THE RIGHT OF WAY, FROM ENGINEERING STATION 49+35.6 TO ENGINEERING STATION 72+87.3, A DISTANCE OF 0.445 MILES, THAT THE DRAWING HAS BEEN PREPARED TO BE FILED FOR THE APPROVAL OF THE SUPERINTENDENT IN ORDER THAT THE APPLICANT MAY OBTAIN THE BENEFITS OF THE ACT OF CONGRESS APPROVED FEBRUARY 5TH, 1948 (62 STAT. 17 25USC 323).

Peggy McWilliams
 RIGHT OF WAY AGENT
 WILLIAMS FOUR CORNERS, LLC

REVISION	4	12/20/13	KS	REVISED ALIGNMENT	WDC1154137	MW	6	08/14/14	MW	REVISED OWNERSHIP	WDC1154137	MW		
	3	10/16/09	MB	UPDATED REFERENCE DWG. NUMBER		PB	5	03/13/14	MW	LINE CHANGE (03/13/14)	WDC1154137	MW		
	NO.	DATE	BY	DESCRIPTION	W.D.NO.	CHK.	APP.	NO.	DATE	BY	DESCRIPTION	W.D.NO.	CHK.	APP.

INFO				DRAFTING				BY				DATE				STATE: COLORADO				HARVEST FOUR CORNERS			
R/W # 07147				DRAWN BY LB				05/02/08				COUNTY: LA PLATA				SAN JUAN GATHERING SYSTEM APPLICATION FOR RIGHT-OF-WAY ACROSS SOUTHERN UTE TRIBAL TRUST LANDS SOUTHERN UTE #705H SECTION 15, T-32-N, R-7-W, NMPM							
REFERENCE DRAWINGS				CHECKED BY PB				05/05/08															
28N765.0-21-3 &				APPROVED BY																			
28N765.0-21-4				ENGINEER				BY				DATE											
				DESIGNED BY								SCALE: 1"=1000'				DWG NO. 765.4-V-2001				SHEET 2		REV 6	
				PROJ. APPROVED								W.D. NO. WDC1154137				SHEET E				300PM MARYW			

APD ID: 10400092029

Submission Date: 05/03/2023

Operator Name: HILCORP ENERGY COMPANY

Well Name: SOUTHERN UTE

Well Number: 705H

Well Type: COALBED NATURAL GAS WELL

Well Work Type: Drill

Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined

Would you like to utilize Lined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit

Pit liner description:

Pit liner manufacturers

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule

Lined pit reclamation description:

Lined pit reclamation

Leak detection system description:

Leak detection system

Operator Name: HILCORP ENERGY COMPANY

Well Name: SOUTHERN UTE

Well Number: 705H

Lined pit Monitor description:

Lined pit Monitor

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information

Section 3 - Unlined

Would you like to utilize Unlined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD disturbance (acres):

PWD surface owner:

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule

Unlined pit reclamation description:

Unlined pit reclamation

Unlined pit Monitor description:

Unlined pit Monitor

Do you propose to put the produced water to beneficial use?

Beneficial use user

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic

State

Unlined Produced Water Pit Estimated

Unlined pit: do you have a reclamation bond for the pit?

Operator Name: HILCORP ENERGY COMPANY

Well Name: SOUTHERN UTE

Well Number: 705H

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information

Section 4 -

Would you like to utilize Injection PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number:

Injection well name:

Assigned injection well API number?

Injection well API number:

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection

Underground Injection Control (UIC) Permit?

UIC Permit

Section 5 - Surface

Would you like to utilize Surface Discharge PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 -

Would you like to utilize Other PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Other PWD discharge volume (bbl/day):

Operator Name: HILCORP ENERGY COMPANY

Well Name: SOUTHERN UTE

Well Number: 705H

Other PWD type description:

Other PWD type

Have other regulatory requirements been met?

Other regulatory requirements



APD ID: 10400092029

Submission Date: 05/03/2023

Operator Name: HILCORP ENERGY COMPANY

Well Name: SOUTHERN UTE

Well Number: 705H

Well Type: COALBED NATURAL GAS WELL

Well Work Type: Drill

Highlighted data
reflects the most
recent changes
[Show Final Text](#)

Bond

Federal/Indian APD: IND

BLM Bond number:

BIA Bond number: SUR0042314

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information