

Form 3160-3
(June 2015)FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

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

1a. Type of work: ☐ DRILL ☐ REENTER 1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other 1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone		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. 30 015 47661
3a. Address	3b. Phone No. (include area code)	10. Field and Pool, or Exploratory
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		11. Sec., T. R. M. or Blk. and Survey or Area
14. Distance in miles and direction from nearest town or post office*		12. County or Parish
13. State		
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
24. Attachments		

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

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

25. Signature	Name (Printed/Typed)	Date
Title		
Approved by (Signature)	Name (Printed/Typed)	Date
Title		
Office		

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

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

Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.

Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string

- Will require a directional survey with the C-104

SL

(Continued on page 2)

KP 11/10/2020 GEO Review

*(Instructions on page 2)

APPROVED WITH CONDITIONS

Approval Date: 11/02/2020

Entered - KMS NMOC

1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

District III

1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102

Revised August 1, 2011

Submit one copy to appropriate

District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-015 47661	2 Pool Code 98220	3 Pool Name Purple Sage; Wolfcamp (Gas)
4 Property Code 329794	5 Property Name CABO WABO FEDERAL COM	6 Well Number 705H
7 OGRID No. 217955	8 Operator Name COG PRODUCTION LLC	9 Elevation 3161'

¹⁰ Surface Location

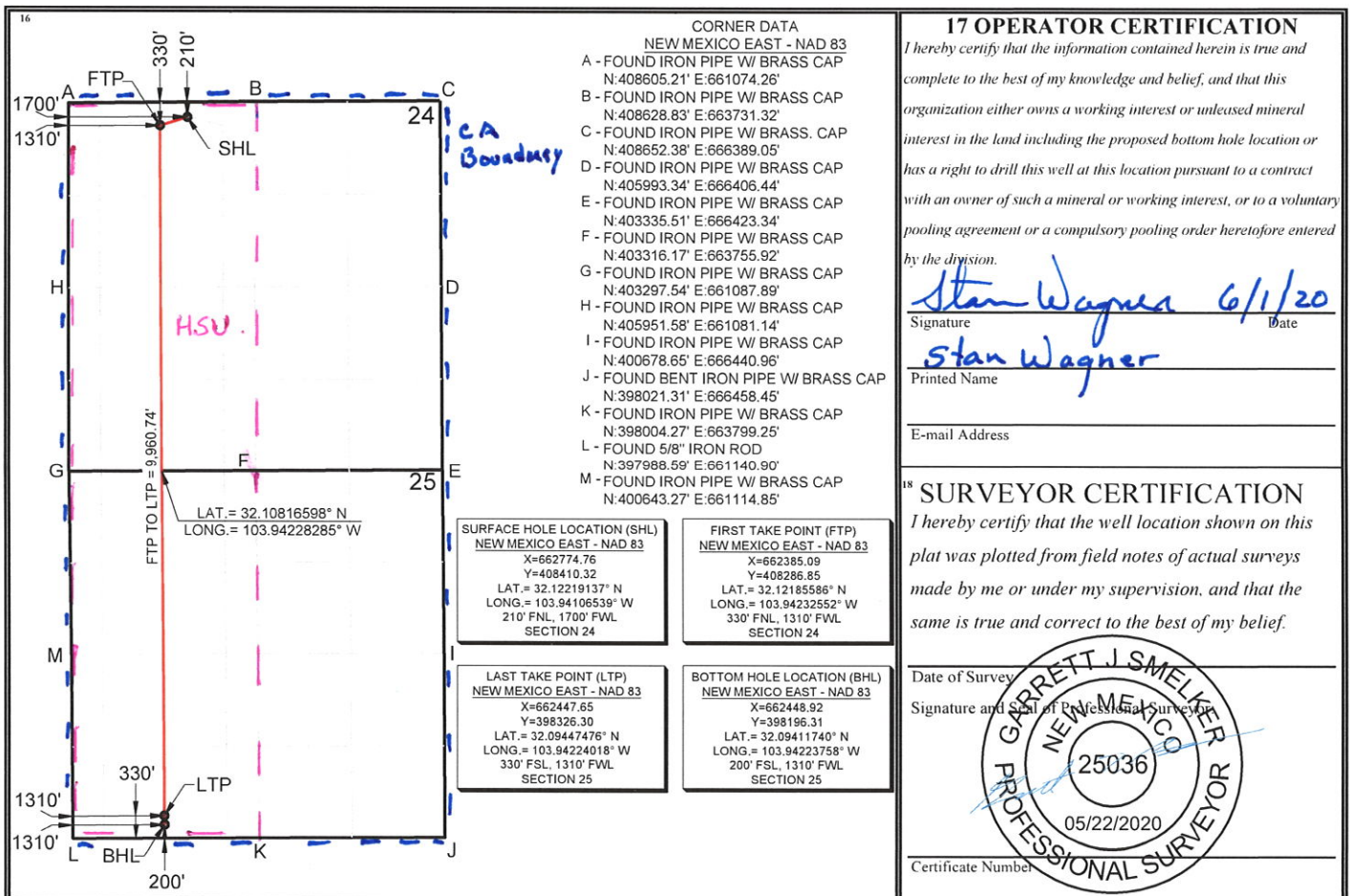
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	24	25-S	29-E		210'	NORTH	1700'	WEST	EDDY

" Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	25	25-S	29-E		200'	SOUTH	1310'	WEST	EDDY

12 Dedicated Acres 640	13 Joint or Infill	14 Consolidation Code	15 Order No.
---------------------------	--------------------	-----------------------	--------------

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



Intent ☒ As Drilled ☐

API #

30-015-

Operator Name:	Property Name:	Well Number
COG Production LLC	Cabo Wabo Federal Com	705H

Kick Off Point (KOP)

UL C	Section 24	Township 25S	Range 29E	Lot	Feet	From N/S	Feet	From E/W	County Eddy
Latitude					Longitude				NAD 83

First Take Point (FTP)

UL D	Section 24	Township 25S	Range 29E	Lot	Feet 330	From N/S North	Feet 1310	From E/W West	County Eddy
Latitude 32.12185586					Longitude -103.94232552				NAD 83

Last Take Point (LTP)

UL M	Section 25	Township 25S	Range 29E	Lot	Feet 330	From N/S South	Feet 1310	From E/W West	County Eddy
Latitude 32.09447476					Longitude -103.94224018				NAD 83

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

Is this well an infill well? ☐

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

API #

Operator Name:	Property Name:	Well Number

KZ 06/29/2018

Additional Operator Remarks

Location of Well

0. SHL: NENW / 210 FNL / 1700 FWL / TWSP: 25S / RANGE: 29E / SECTION: 24 / LAT: 32.1221913 / LONG: -103.9410653 (TVD: 0 feet, MD: 0 feet)

PPP: NWNW / 330 FNL / 1310 FWL / TWSP: 25S / RANGE: 29E / SECTION: 24 / LAT: 32.1218558 / LONG: -103.9423255 (TVD: 10554 feet, MD: 10622 feet)

BHL: SWSW / 200 FSL / 1310 FWL / TWSP: 25S / RANGE: 29E / SECTION: 25 / LAT: 32.0941174 / LONG: -103.9422401 (TVD: 10713 feet, MD: 20628 feet)

BLM Point of Contact

Name: Gavin Mickwee

Title: Land Law Examiner

Phone: (575) 234-5972

Email: gmickwee@blm.gov

CONFIDENTIAL

Pecos District
Application for Permit to Drill
Conditions of Approval

Geology Concerns

Potash	☒ None	☐ Secretary	☐ R-111-P
Cave/Karst	☐ Medium	☐ High	☐ Critical
H2S	☐ None	☐ Below 100 PPM	☐ Above 100 PPM
Other	☐ 4 String Area	☐ Capitan Reef	☐ SWD Well

Note: The geology of the area where the well is being drilled determines the COAs that apply, not the above table.

Additional Engineering Requirements

Surface casing must be set at: 755'

General Requirements

1. Changes to the approved APD casing program need prior approval.
2. The Bureau of Land Management (BLM) will be notified in advance to witness:
 - a. Well spudding (minimum 24 hours notice)
 - b. Setting and cementing of all casing strings (minimum 4 hours notice)
 - c. BOPE tests (minimum 4 hours notice)

Eddy County

620 East Greene Street, Carlsbad, NM 88220
(575) 361-2822

Lea County

414 West Taylor, Hobbs, NM 88240
(575) 393-3612

3. The initial wellhead installed on the well will remain on the well with spools used as needed.
4. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig:

- i. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with a Spudder Rig:
 - i. Notify the BLM when moving in and removing the Spudder Rig.
 - ii. Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - iii. BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
5. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller, and will always be operational during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the doghouse or stairway area.
6. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

Pressure Control

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. 5M or higher system requires an HCR valve, remote kill line, and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE, and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
 - b. The results of the test shall be reported to the appropriate BLM office.
 - c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

- d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
 - e. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.
 - f. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - g. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, no tests shall commence until the cement has had a minimum of 24 hours setup time.
 - h. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
4. If the operator has proposed using a 5,000 (5M) Annular on a 10M BOP:
- a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 10,000 (10M) psi.
5. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
- a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.

- c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
 - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
6. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply:
- a. The flex line must meet the requirements of API 16C.
 - b. Check condition of flexible line from BOP to choke manifold (replace if exterior is damaged or if line fails test).
 - c. Line is to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements.
 - d. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating.
 - e. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

Casing and Cement

1. Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).
2. On any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. The formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
3. Provide compressive strengths (including hours to reach required 500 pounds compressive strength) prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
4. The surface casing shall be set at a minimum of 25 feet into the Rustler Anhydrite and 80 feet above the salt and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

- b. Wait on cement (WOC) time for a primary cement job will be a minimum of 8 hours (or 24 hours in the Potash Area) or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
- 5. Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.
- 6. Intermediate casing must be cemented to surface. For medium/high cave/karst, potash, and Capitan Reef, wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.
- 7. The production cement should tie-back at least 200 feet (500 feet in Secretary Potash, surface in R-111-P potash) into previous casing string. Operator shall provide method of verification.
- 8. Production liner cement should tie-back at least 100 feet into previous casing string. Operator shall provide verification of cement top.
- 9. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 10. No pea gravel permitted for remedial cement or fall back remedial cement without prior authorization from a BLM petroleum engineer.
- 11. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
- 12. DV tools:
 - a. First stage to DV tool (The DV tool may be cancelled if cement circulates to surface on the first stage):
 - i. Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
 - b. Second stage above DV tool:
 - i. For intermediate casing, cement to surface.

- ii. For production casing, cement should tie-back at least 200 feet (500 feet in Secretary Potash, surface in R-111-P potash) into previous casing string. Operator shall provide method of verification.
- iii. If cement does not circulate, contact the appropriate BLM office.

13. Wait on cement (WOC) for Potash Areas:

- a. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.
- b. After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met:
 - i. Cement reaches a minimum compressive strength of 500 psi for all cement blends
 - ii. Until cement has been in place at least 24 hours.
- c. WOC time will be recorded in the driller's log.
- d. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

14. Wait on cement (WOC) for Water Basin:

- a. After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met:
 - i. Cement reaches a minimum compressive strength of 500 psi at the shoe
 - ii. Until cement has been in place at least 8 hours.
- b. WOC time will be recorded in the driller's log.

15. Wait on cement (WOC) for Medium and High Cave/Karst Areas:

- a. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

16. If cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

Drilling Mud

- 1. Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

Waste Material and Fluids

- 1. All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

2. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

Special Requirements

1. Communitization Agreement
 - a. The operator will submit a Communitization Agreement to the Carlsbad Field Office (620 E Greene St. Carlsbad, New Mexico 88220), at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division.
 - b. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
 - i. If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
 - c. In addition, the well sign shall include the surface and bottom hole lease numbers.
 - i. When the Communitization Agreement number is known, it shall also be on the sign.
2. Unit Wells
 - a. The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers.
 - i. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number when the sign is replaced.
 - b. Commercial Well Determination
 - i. A commercial well determination shall be submitted after production has been established for at least six months (this is not necessary for secondary recovery unit wells).
3. Hydrogen Sulfide (H₂S)
 - a. If H₂S is encountered, provide measured values and formations to the BLM.
 - b. An H₂S area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items.
 - c. An H₂S Drilling Plan shall be activated 500 feet prior to drilling into the any formation designated as having H₂S.

- d. Hydrogen Sulfide monitors shall be installed prior to drilling out the surface shoe. If H₂S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items.

4. Capitan Reef

- a. If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following (Use this for 3 string wells in the Capitan Reef, if 4 string well ensure fresh water based mud used across the Capitan interval):
 - i. Switch to fresh water mud to protect the Capitan Reef and use fresh water mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.
 - ii. Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports.
 - iii. The daily drilling report should show mud volume per shift/tour.
 - iv. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval.
 - v. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.

5. Salt Water Disposal Wells

- a. The operator shall supply the BLM with a copy of a mudlog over the permitted disposal interval and estimated in situ water salinity based on open-hole logs.
- b. If hydrocarbons are encountered while drilling, the operator shall notify the BLM.
- c. The operator shall provide to the BLM a summary of formation depth picks based on mudlog and geophysical logs along with a copy of the mudlog and open-hole logs from total depth to top of Devonian.
- d. An NOI sundry with the completion procedure for this well shall be submitted and approved prior to commencing completion work. The procedure will be reviewed to verify that the completion proposal will allow the operator to:
 - i. Properly evaluate the injection zone utilizing open-hole logs, swab testing and/or any other method to confirm that hydrocarbons cannot be produced in paying quantities. This evaluation shall be reviewed by the BLM prior to injection commencing.
 - ii. Restrict the injection fluid to the approved formation.
 - iii. If a step rate test will be run, an NOI sundry shall be submitted to the BLM for approval.
- e. If off-lease water will be disposed in this well, the operator shall provide proof of right-of-way approval.

COG Operating, LLC - Cabo Wabo Federal Com 705H

1. Geologic Formations

TVD of target	10,713' EOL	Pilot hole depth	NA
MD at TD:	20,629'	Deepest expected fresh water:	65'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	975	Water	
Top of Salt	1159	Salt	
Base of Salt	3232	Salt	
Lamar	3431	Salt Water	
Bell Canyon	3459	Salt Water	
Cherry Canyon	4318	Oil/Gas	
Brushy Canyon	5598	Oil/Gas	
Bone Spring Lime	7158	Oil/Gas	
1st Bone Spring Sand	8112	Oil/Gas	
2nd Bone Spring Sand	8956	Oil/Gas	
3rd Bone Spring Sand	10029	Oil/Gas	
Wolfcamp	10393	Target Oil/Gas	
Wolfcamp B	10870	Not Penetrated	
Wolfcamp C	11155	Not Penetrated	

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Body	SF Joint
	From	To								
14.75"	0	1170	10.75"	45.5	N80	BTC	4.61	1.67	19.54	20.61
9.875"	0	8500	7.625"	29.7	HCL80	BTC	1.56	1.24	2.88	2.90
8.750"	8500	10000	7.625"	29.7	HCP110	TL-FJ	1.51	1.28	3.16	2.22
6.75"	0	9800	5.5"	20	P110	BTC	1.59	2.15	2.99	3.11
6.75"	9800	20,629	5.5"	20	P110	SF	1.59	2.15	2.99	3.11
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

Intermediate casing will be kept at least 1/3 full while running casing to mitigate collapse. Surface burst based on 0.7 frac gradient at the shoe with Gas Gradient 0.1 psi/ft to surface and All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

The 5" casing will be run back 200' into the intermediate casing to ensure the coupling OD clearance is greater than .422" for the cement bond tie in.

COG Operating, LLC - Cabo Wabo Federal Com 705H

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	Y
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary?	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

COG Operating, LLC - Cabo Wabo Federal Com 705H

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft ³ / sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	558	13.5	1.75	9	12	Lead: Class C + 4% Gel + 1% CaCl ₂
	250	14.8	1.34	6.34	8	Tail: Class C + 2% CaCl ₂
Inter. Stage 1	770	10.3	3.3	22	24	Halliburton tunded light
	250	14.8	1.35	6.6	8	Tail: Class H
Prod	455	12.7	2	10.7	72	Lead: 50:50:10 H Blend
	1021	14.4	1.24	5.7	19	Tail: 50:50:2 Class H Blend

If losses are encountered in the intermediate section a DV/ECP tool will be run ~50' above the Lamar Lime top, cement will be adjusted accordingly if this contingency is necessary.

Volumes Subject to Observed Hole Conditions and/or Fluid Caliper Results

Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Casing String	TOC	% Excess
Surface	0'	50%
1 st Intermediate	0'	50%
Production	8,000'	35% OH in Lateral (KOP to EOL)

4. Pressure Control Equipment

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.
---	---

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	x	Tested to:
9-7/8"	13-5/8"	5M	Annular	x	2500psi
			Blind Ram	x	5000psi
			Pipe Ram	x	
			Double Ram	x	
			Other*		
6-3/4"	13-5/8"	10M	5M Annular	x	5000psi
			Blind Ram	x	10000psi
			Pipe Ram	x	
			Double Ram	x	
			Other*		

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

Y	Formation integrity test will be performed per Onshore Order #2.
Y	On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
N	Are anchors required by manufacturer?
Y	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. Shoe	FW Gel	8.6 - 8.8	28-34	N/C
Surf csg	9-5/8" Int shoe	Brine Diesel Emulsion	8.4 - 9	28-34	N/C
7-5/8" Int shoe	Lateral TD	OBM	9.6 - 12.5	35-45	<20

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring
---	-----------------------------

6. Logging and Testing Procedures

Logging, Coring and Testing.	
Y	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
Y	No Logs are planned based on well control or offset log information.
N	Drill stem test? If yes, explain.
N	Coring? If yes, explain.

Additional logs planned		Interval
N	Resistivity	Pilot Hole TD to ICP
N	Density	Pilot Hole TD to ICP
Y	CBL	Production casing (If cement not circulated to surface)
Y	Mud log	Intermediate shoe to TD
N	PEX	

COG Operating, LLC - Cabo Wabo Federal Com 705H

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	6965 psi at 10713' TVD
Abnormal Temperature	NO 165 Deg. F.

No abnormal pressure or temperature conditions are anticipated. Sufficient mud materials to maintain mud properties and weight increase requirements will be kept on location at all times.

Sufficient supplies of Paper/LCM for periodic sweeps to control seepage and losses will be maintained on location.

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
N	H2S is present
Y	H2S Plan attached

8. Other Facets of Operation

Y	Is it a walking operation?
Y	Is casing pre-set?

x	H2S Plan.
x	BOP & Choke Schematics.
x	Directional Plan

DELAWARE BASIN WEST

ATLAS PROSPECT (NM-E)

CABO WABO FEDERAL PROJECT (ATLAS 2529)

CABO WABO FED COM #705H

OWB

PWP2

Anticollision Report

26 May, 2020

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Reference Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	CABO WABO FED COM #705H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP2	Offset TVD Reference:	Offset Datum

Reference	PWP2
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	Stations
Depth Range:	Unlimited
Results Limited by:	Maximum ellipse separation of 1,000.0 usft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Pedal Curve
Casing Method:	Not applied

Survey Tool Program		Date	5/26/2020		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	10,039.0	PWP2 (OWB)	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4	
10,039.0	20,627.8	PWP2 (OWB)	MWD+IFR1+FDIR	OWSG MWD + IFR1 + FDIR Correction	

Summary						
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						
CABO WABO FEDERAL PROJECT (ATLAS 2529)						
CABO WABO 24 FED COM #5H - OWB - ACTUAL WEL	8,000.0	12,448.0	876.1	791.6	10.369	SF
CABO WABO 24 FED COM #5H - OWB - ACTUAL WEL	8,030.9	12,448.0	875.6	791.2	10.374	CC, ES
CABO WABO FED COM #503H - OWB - PWP0	6,100.0	6,105.8	78.4	63.6	5.322	SF
CABO WABO FED COM #503H - OWB - PWP0	6,195.0	6,199.6	76.8	62.5	5.363	CC, ES
CABO WABO FED COM #504H - OWB - PWP0	2,500.0	2,492.0	395.5	388.1	53.180	CC, ES
CABO WABO FED COM #504H - OWB - PWP0	9,500.0	9,115.8	785.8	763.0	34.477	SF
CABO WABO FED COM #701H - OWB - PWP1						Out of range
CABO WABO FED COM #702H - OWB - PWP2						Out of range
CABO WABO FED COM #703H - OWB - PWP1						Out of range
CABO WABO FED COM #704H - OWB - PWP1	2,500.0	2,500.0	30.0	23.1	4.350	CC, ES, SF
CABO WABO FED COM #706H - OWB - PWP1	2,500.0	2,499.0	30.0	23.1	4.344	CC, ES, SF
CABO WABO FED COM #803H - OWB - PWP0						Out of range
CABO WABO FED COM #804H - OWB - PWP0	5,629.5	5,637.5	60.3	32.4	2.164	CC, ES, SF
CABO WABO FED COM #805H - OWB - PWP0	9,339.2	9,318.8	195.9	152.6	4.529	CC
CABO WABO FED COM #805H - OWB - PWP0	9,500.0	9,479.2	196.3	152.3	4.466	ES
CABO WABO FED COM #805H - OWB - PWP0	20,628.6	21,568.4	727.1	561.8	4.398	SF

CABO WABO FEDERAL PROJECT (ATLAS 2529) - CABO WABO 24 FED COM #5H - OWB - ACTUA											Offset Site Error:		3.0 usft
Survey Program: 100- VES GyroFlex, 7290-MWD											Offset Well Error:		3.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,600.0	7,594.1	12,448.0	7,868.4	8.7	79.0	0.60	-163.9	-1,047.8	975.9	894.3	81.60	11.959	
7,700.0	7,693.8	12,448.0	7,868.4	8.7	79.0	0.60	-163.9	-1,047.8	936.1	853.1	82.97	11.282	
7,800.0	7,793.5	12,448.0	7,868.4	8.8	79.0	0.60	-163.9	-1,047.8	905.5	821.6	83.95	10.786	
7,900.0	7,893.2	12,448.0	7,868.4	8.9	79.0	0.60	-163.9	-1,047.8	885.3	800.9	84.47	10.481	
8,000.0	7,992.9	12,448.0	7,868.4	8.9	79.0	0.60	-163.9	-1,047.8	876.1	791.6	84.50	10.369	SF
8,030.9	8,023.8	12,448.0	7,868.4	9.0	79.0	0.60	-163.9	-1,047.8	875.6	791.2	84.41	10.374	CC, ES
8,100.0	8,092.6	12,448.0	7,868.4	9.0	79.0	0.60	-163.9	-1,047.8	878.3	794.3	84.03	10.452	
8,200.0	8,192.3	12,448.0	7,868.4	9.1	79.0	0.60	-163.9	-1,047.8	891.8	808.7	83.12	10.729	
8,300.0	8,292.0	12,448.0	7,868.4	9.2	79.0	0.60	-163.9	-1,047.8	916.0	834.2	81.80	11.197	
8,400.0	8,391.7	12,448.0	7,868.4	9.2	79.0	0.60	-163.9	-1,047.8	950.2	870.0	80.20	11.848	

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

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Reference Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	CABO WABO FED COM #705H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design CABO WABO FEDERAL PROJECT (ATLAS 2529) - CABO WABO 24 FED COM #5H - OWB - ACTUA												Offset Site Error:	3.0 usft
Survey Program: 100- VES GyroFlex, 7290-MWD												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis		Distance									Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,500.0	8,491.4	12,448.0	7,868.4	9.3	79.0	0.60	-163.9	-1,047.8	993.3	914.9	78.40	12.670	

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Reference Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	CABO WABO FED COM #705H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design CABO WABO FEDERAL PROJECT (ATLAS 2529) - CABO WABO FED COM #503H - OWB - PWP0													Offset Site Error:	3.0 usft
Survey Program: 0-Standard Keeper 104, 8559-MWD+IFR1+FDIR													Offset Well Error:	3.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	3.0	3.0	-123.23	-202.7	-309.5	370.1					
100.0	100.0	92.0	92.0	3.0	3.0	-123.23	-202.7	-309.5	370.0	364.0	6.00	61.662		
200.0	200.0	192.0	192.0	3.0	3.0	-123.23	-202.7	-309.5	370.0	364.0	6.00	61.614		
300.0	300.0	292.0	292.0	3.0	3.0	-123.23	-202.7	-309.5	370.0	364.0	6.02	61.507		
400.0	400.0	392.0	392.0	3.0	3.0	-123.23	-202.7	-309.5	370.0	364.0	6.03	61.342		
500.0	500.0	492.0	492.0	3.1	3.1	-123.23	-202.7	-309.5	370.0	363.9	6.05	61.121		
600.0	600.0	592.0	592.0	3.1	3.1	-123.23	-202.7	-309.5	370.0	363.9	6.08	60.846		
700.0	700.0	692.0	692.0	3.1	3.1	-123.23	-202.7	-309.5	370.0	363.9	6.11	60.518		
800.0	800.0	792.0	792.0	3.2	3.1	-123.23	-202.7	-309.5	370.0	363.8	6.15	60.141		
900.0	900.0	892.0	892.0	3.2	3.2	-123.23	-202.7	-309.5	370.0	363.8	6.20	59.716		
1,000.0	1,000.0	992.0	992.0	3.2	3.2	-123.23	-202.7	-309.5	370.0	363.7	6.24	59.248		
1,100.0	1,100.0	1,092.0	1,092.0	3.3	3.3	-123.23	-202.7	-309.5	370.0	363.7	6.30	58.740		
1,200.0	1,200.0	1,192.0	1,192.0	3.4	3.3	-123.23	-202.7	-309.5	370.0	363.6	6.36	58.195		
1,300.0	1,300.0	1,292.0	1,292.0	3.4	3.4	-123.23	-202.7	-309.5	370.0	363.6	6.42	57.617		
1,400.0	1,400.0	1,392.0	1,392.0	3.5	3.5	-123.23	-202.7	-309.5	370.0	363.5	6.49	57.008		
1,500.0	1,500.0	1,492.0	1,492.0	3.5	3.5	-123.23	-202.7	-309.5	370.0	363.4	6.56	56.373		
1,600.0	1,600.0	1,592.0	1,592.0	3.6	3.6	-123.23	-202.7	-309.5	370.0	363.4	6.64	55.716		
1,700.0	1,700.0	1,692.0	1,692.0	3.7	3.7	-123.23	-202.7	-309.5	370.0	363.3	6.72	55.038		
1,800.0	1,800.0	1,792.0	1,792.0	3.8	3.8	-123.23	-202.7	-309.5	370.0	363.2	6.81	54.345		
1,900.0	1,900.0	1,892.0	1,892.0	3.9	3.8	-123.23	-202.7	-309.5	370.0	363.1	6.90	53.638		
2,000.0	2,000.0	1,992.0	1,992.0	3.9	3.9	-123.23	-202.7	-309.5	370.0	363.0	6.99	52.920		
2,100.0	2,100.0	2,092.0	2,092.0	4.0	4.0	-123.23	-202.7	-309.5	370.0	362.9	7.09	52.195		
2,200.0	2,200.0	2,192.0	2,192.0	4.1	4.1	-123.23	-202.7	-309.5	370.0	362.8	7.19	51.464		
2,300.0	2,300.0	2,292.0	2,292.0	4.2	4.2	-123.23	-202.7	-309.5	370.0	362.7	7.29	50.730		
2,400.0	2,400.0	2,392.0	2,392.0	4.3	4.3	-123.23	-202.7	-309.5	370.0	362.6	7.40	49.995		
2,500.0	2,500.0	2,492.0	2,492.0	4.4	4.4	-123.23	-202.7	-309.5	370.0	362.5	7.51	49.261		
2,600.0	2,600.0	2,605.3	2,605.3	4.5	4.5	-123.28	-202.0	-307.7	368.3	360.7	7.64	48.194		
2,700.0	2,700.0	2,719.5	2,719.3	4.6	4.5	-123.46	-199.5	-301.8	362.8	355.0	7.79	46.566		
2,800.0	2,800.0	2,822.9	2,822.3	4.7	4.6	-123.72	-196.0	-293.6	354.3	346.4	7.94	44.624		
2,900.0	2,900.0	2,922.6	2,921.6	4.8	4.7	-123.99	-192.6	-285.6	345.8	337.7	8.09	42.717		
3,000.0	3,000.0	3,022.2	3,020.8	4.9	4.7	-124.28	-189.2	-277.6	337.2	329.0	8.25	40.858		
3,100.0	3,100.0	3,121.8	3,120.1	5.0	4.8	-124.57	-185.8	-269.6	328.7	320.2	8.42	39.048		
3,200.0	3,200.0	3,221.4	3,219.3	5.1	4.9	-124.89	-182.4	-261.6	320.1	311.5	8.59	37.288		
3,300.0	3,300.0	3,321.0	3,318.5	5.2	4.9	-125.22	-179.0	-253.7	311.6	302.8	8.76	35.579		
3,400.0	3,400.0	3,420.7	3,417.8	5.3	5.0	-125.56	-175.6	-245.7	303.1	294.2	8.94	33.920		
3,500.0	3,500.0	3,520.3	3,517.0	5.4	5.1	-125.93	-172.2	-237.7	294.6	285.5	9.12	32.311		
3,600.0	3,600.0	3,619.9	3,616.3	5.5	5.2	-126.32	-168.9	-229.7	286.1	276.8	9.30	30.751		
3,700.0	3,700.0	3,719.5	3,715.5	5.7	5.3	-126.74	-165.5	-221.7	277.6	268.1	9.49	29.240		
3,800.0	3,800.0	3,819.1	3,814.7	5.8	5.3	-127.18	-162.1	-213.7	269.2	259.5	9.69	27.778		
3,900.0	3,900.0	3,918.8	3,914.0	5.9	5.4	-127.65	-158.7	-205.7	260.7	250.8	9.89	26.363		
4,000.0	4,000.0	4,018.4	4,013.2	6.0	5.5	-128.15	-155.3	-197.7	252.3	242.2	10.09	24.994		
4,100.0	4,100.0	4,118.0	4,112.5	6.1	5.6	-128.68	-151.9	-189.7	243.9	233.6	10.30	23.671		
4,200.0	4,200.0	4,217.6	4,211.7	6.2	5.7	-129.26	-148.5	-181.7	235.5	225.0	10.52	22.393		
4,300.0	4,300.0	4,317.2	4,311.0	6.3	5.8	-129.87	-145.1	-173.7	227.2	216.4	10.74	21.158		
4,400.0	4,400.0	4,416.9	4,410.2	6.5	5.9	-130.53	-141.7	-165.7	218.8	207.9	10.96	19.965		
4,500.0	4,500.0	4,516.5	4,509.4	6.6	6.0	-131.25	-138.3	-157.7	210.5	199.3	11.19	18.814		
4,600.0	4,600.0	4,616.1	4,608.7	6.7	6.1	-132.02	-134.9	-149.8	202.3	190.8	11.43	17.703		
4,700.0	4,700.0	4,715.7	4,707.9	6.8	6.2	-132.86	-131.5	-141.8	194.0	182.4	11.67	16.632		
4,800.0	4,800.0	4,815.3	4,807.2	6.9	6.3	-133.77	-128.1	-133.8	185.9	174.0	11.91	15.600		
4,900.0	4,900.0	4,914.9	4,906.4	7.0	6.4	-134.77	-124.8	-125.8	177.7	165.6	12.17	14.607		
5,000.0	5,000.0	5,014.6	5,005.6	7.2	6.5	-135.86	-121.4	-117.8	169.7	157.2	12.43	13.651		

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

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Reference Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	CABO WABO FED COM #705H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design CABO WABO FEDERAL PROJECT (ATLAS 2529) - CABO WABO FED COM #503H - OWB - PWP0												Offset Site Error:	3.0 usft
Survey Program: 0-Standard Keeper 104, 8559-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	5,100.0	5,114.2	5,104.9	7.3	6.6	-137.06	-118.0	-109.8	161.7	149.0	12.70	12.732	
5,200.0	5,200.0	5,213.8	5,204.1	7.4	6.7	-138.38	-114.6	-101.8	153.7	140.8	12.97	11.851	
5,300.0	5,300.0	5,313.4	5,303.4	7.5	6.8	-139.85	-111.2	-93.8	145.9	132.7	13.26	11.007	
5,400.0	5,400.0	5,413.0	5,402.6	7.6	6.9	-141.48	-107.8	-85.8	138.2	124.6	13.55	10.200	
5,500.0	5,500.0	5,512.7	5,501.8	7.8	7.0	-143.30	-104.4	-77.8	130.6	116.7	13.85	9.430	
5,600.0	5,600.0	5,612.1	5,600.9	7.8	7.1	-46.67	-101.0	-69.8	121.9	107.8	14.12	8.636	
5,700.0	5,699.8	5,711.2	5,699.6	7.9	7.2	-51.21	-97.6	-61.9	111.4	97.0	14.38	7.742	
5,722.3	5,722.1	5,733.2	5,721.5	7.9	7.2	-52.54	-96.9	-60.1	108.8	94.4	14.45	7.531	
5,800.0	5,799.5	5,809.8	5,797.9	7.9	7.3	-57.65	-94.3	-54.0	100.2	85.6	14.66	6.838	
5,900.0	5,899.2	5,908.5	5,896.2	7.9	7.4	-65.54	-90.9	-46.1	90.6	75.8	14.86	6.099	
6,000.0	5,998.9	6,007.2	5,994.4	7.9	7.5	-75.03	-87.6	-38.2	83.1	68.2	14.91	5.577	
6,100.0	6,098.6	6,105.8	6,092.7	8.0	7.6	-85.98	-84.2	-30.2	78.4	63.6	14.73	5.322 SF	
6,195.0	6,193.4	6,199.6	6,186.1	8.0	7.7	-97.23	-81.0	-22.7	76.8	62.5	14.33	5.363 CC, ES	
6,200.0	6,198.3	6,204.5	6,191.0	8.0	7.7	-97.83	-80.8	-22.3	76.8	62.5	14.30	5.373	
6,300.0	6,298.0	6,303.1	6,289.3	8.0	7.8	-109.62	-77.5	-14.4	78.7	65.0	13.74	5.727	
6,400.0	6,397.7	6,401.8	6,387.6	8.1	8.0	-120.45	-74.1	-6.5	83.8	70.5	13.24	6.328	
6,500.0	6,497.4	6,500.5	6,485.9	8.1	8.1	-129.78	-70.8	1.4	91.5	78.6	12.90	7.093	
6,600.0	6,597.1	6,599.1	6,584.2	8.2	8.2	-137.51	-67.4	9.3	101.3	88.5	12.75	7.945	
6,700.0	6,696.8	6,697.8	6,682.5	8.2	8.3	-143.81	-64.0	17.3	112.6	99.8	12.74	8.838	
6,800.0	6,796.5	6,796.5	6,780.7	8.2	8.4	-148.93	-60.7	25.2	125.0	112.2	12.82	9.747	
6,900.0	6,896.2	6,895.1	6,879.0	8.3	8.5	-153.10	-57.3	33.1	138.2	125.2	12.97	10.658	
7,000.0	6,995.9	6,993.8	6,977.3	8.3	8.6	-156.54	-54.0	41.0	152.0	138.9	13.15	11.564	
7,100.0	7,095.6	7,092.4	7,075.6	8.4	8.7	-159.40	-50.6	48.9	166.3	153.0	13.35	12.460	
7,200.0	7,195.3	7,191.1	7,173.9	8.5	8.9	-161.80	-47.2	56.8	180.9	167.4	13.56	13.344	
7,300.0	7,295.0	7,289.8	7,272.2	8.5	9.0	-163.85	-43.9	64.7	195.8	182.0	13.78	14.212	
7,400.0	7,394.7	7,388.4	7,370.5	8.6	9.1	-165.60	-40.5	72.7	210.9	196.9	14.00	15.065	
7,500.0	7,494.4	7,487.1	7,468.8	8.6	9.2	-167.12	-37.2	80.6	226.1	211.9	14.22	15.900	
7,600.0	7,594.1	7,585.8	7,567.0	8.7	9.3	-168.45	-33.8	88.5	241.5	227.1	14.45	16.718	
7,700.0	7,693.8	7,684.4	7,665.3	8.7	9.4	-169.62	-30.4	96.4	257.0	242.3	14.67	17.517	
7,800.0	7,793.5	7,783.1	7,763.6	8.8	9.6	-170.65	-27.1	104.3	272.6	257.7	14.90	18.299	
7,900.0	7,893.2	7,881.8	7,861.9	8.9	9.7	-171.58	-23.7	112.2	288.3	273.2	15.12	19.062	
8,000.0	7,992.9	7,980.4	7,960.2	8.9	9.8	-172.40	-20.4	120.2	304.0	288.7	15.35	19.806	
8,100.0	8,092.6	8,079.1	8,058.5	9.0	9.9	-173.15	-17.0	128.1	319.8	304.2	15.58	20.533	
8,200.0	8,192.3	8,177.7	8,156.8	9.1	10.0	-173.83	-13.6	136.0	335.7	319.9	15.80	21.241	
8,300.0	8,292.0	8,276.4	8,255.1	9.2	10.1	-174.44	-10.3	143.9	351.6	335.5	16.03	21.932	
8,400.0	8,391.7	8,375.1	8,353.3	9.2	10.3	-175.00	-6.9	151.8	367.5	351.2	16.26	22.605	
8,500.0	8,491.4	8,473.7	8,451.6	9.3	10.4	-175.52	-3.6	159.7	383.4	366.9	16.48	23.262	
8,600.0	8,591.1	8,572.3	8,549.9	9.4	10.5	-175.96	-0.4	167.7	399.4	382.7	16.70	23.914	
8,700.0	8,690.8	8,669.8	8,646.5	9.5	10.5	-174.87	-8.0	176.5	415.5	398.7	16.83	24.689	
8,800.0	8,790.5	8,762.0	8,735.4	9.5	10.5	-171.88	-30.1	186.2	432.8	415.8	17.00	25.452	
8,900.0	8,890.2	8,845.2	8,811.5	9.6	10.6	-167.81	-62.1	195.8	453.4	436.0	17.34	26.148	
9,000.0	8,989.9	8,917.7	8,873.4	9.7	10.6	-163.41	-98.7	204.7	479.6	461.7	17.95	26.717	
9,100.0	9,089.6	8,979.5	8,922.1	9.8	10.7	-159.20	-135.9	212.5	513.4	494.5	18.92	27.142	
9,200.0	9,189.3	9,031.7	8,959.9	9.9	10.7	-155.43	-171.3	219.2	555.5	535.3	20.19	27.518	
9,300.0	9,289.0	9,075.8	8,989.1	10.0	10.8	-152.19	-203.7	224.9	605.7	584.1	21.64	27.994	
9,400.0	9,388.7	9,113.0	9,011.8	10.0	10.9	-149.43	-232.8	229.7	663.4	640.3	23.13	28.682	
9,500.0	9,488.4	9,150.0	9,032.4	10.1	10.9	-146.71	-263.2	234.5	727.6	703.1	24.49	29.708	
9,600.0	9,588.1	9,171.5	9,043.5	10.2	10.9	-145.14	-281.4	237.2	797.1	771.2	25.89	30.783	
9,700.0	9,687.8	9,200.0	9,057.1	10.3	11.0	-143.11	-306.2	240.8	871.2	844.2	27.04	32.214	
9,800.0	9,787.5	9,215.0	9,063.7	10.4	11.0	-142.06	-319.5	242.7	948.9	920.7	28.19	33.667	

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Reference Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	CABO WABO FED COM #705H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design CABO WABO FEDERAL PROJECT (ATLAS 2529) - CABO WABO FED COM #504H - OWB - PWP0												Offset Site Error: 3.0 usft		
Survey Program: 0-Standard Keeper 104, 8556-MWD+IFR1+IFDIR												Offset Well Error: 3.0 usft		
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.0	0.0	0.0	0.0	3.0	3.0	-120.87	-202.9	-339.5	395.6					
100.0	100.0	92.0	92.0	3.0	3.0	-120.87	-202.9	-339.5	395.5	389.5	6.00	65.915		
200.0	200.0	192.0	192.0	3.0	3.0	-120.87	-202.9	-339.5	395.5	389.5	6.00	65.867		
300.0	300.0	292.0	292.0	3.0	3.0	-120.87	-202.9	-339.5	395.5	389.5	6.01	65.759		
400.0	400.0	392.0	392.0	3.0	3.0	-120.87	-202.9	-339.5	395.5	389.5	6.03	65.593		
500.0	500.0	492.0	492.0	3.1	3.1	-120.87	-202.9	-339.5	395.5	389.5	6.05	65.369		
600.0	600.0	592.0	592.0	3.1	3.1	-120.87	-202.9	-339.5	395.5	389.4	6.08	65.090		
700.0	700.0	692.0	692.0	3.1	3.1	-120.87	-202.9	-339.5	395.5	389.4	6.11	64.758		
800.0	800.0	792.0	792.0	3.2	3.1	-120.87	-202.9	-339.5	395.5	389.4	6.14	64.375		
900.0	900.0	892.0	892.0	3.2	3.2	-120.87	-202.9	-339.5	395.5	389.3	6.19	63.944		
1,000.0	1,000.0	992.0	992.0	3.2	3.2	-120.87	-202.9	-339.5	395.5	389.3	6.23	63.468		
1,100.0	1,100.0	1,092.0	1,092.0	3.3	3.3	-120.87	-202.9	-339.5	395.5	389.2	6.28	62.950		
1,200.0	1,200.0	1,192.0	1,192.0	3.4	3.3	-120.87	-202.9	-339.5	395.5	389.2	6.34	62.394		
1,300.0	1,300.0	1,292.0	1,292.0	3.4	3.4	-120.87	-202.9	-339.5	395.5	389.1	6.40	61.803		
1,400.0	1,400.0	1,392.0	1,392.0	3.5	3.5	-120.87	-202.9	-339.5	395.5	389.0	6.46	61.181		
1,500.0	1,500.0	1,492.0	1,492.0	3.5	3.5	-120.87	-202.9	-339.5	395.5	389.0	6.53	60.531		
1,600.0	1,600.0	1,592.0	1,592.0	3.6	3.6	-120.87	-202.9	-339.5	395.5	388.9	6.61	59.856		
1,700.0	1,700.0	1,692.0	1,692.0	3.7	3.7	-120.87	-202.9	-339.5	395.5	388.8	6.69	59.160		
1,800.0	1,800.0	1,792.0	1,792.0	3.8	3.8	-120.87	-202.9	-339.5	395.5	388.7	6.77	58.446		
1,900.0	1,900.0	1,892.0	1,892.0	3.9	3.8	-120.87	-202.9	-339.5	395.5	388.7	6.85	57.717		
2,000.0	2,000.0	1,992.0	1,992.0	3.9	3.9	-120.87	-202.9	-339.5	395.5	388.6	6.94	56.976		
2,100.0	2,100.0	2,092.0	2,092.0	4.0	4.0	-120.87	-202.9	-339.5	395.5	388.5	7.03	56.226		
2,200.0	2,200.0	2,192.0	2,192.0	4.1	4.1	-120.87	-202.9	-339.5	395.5	388.4	7.13	55.469		
2,300.0	2,300.0	2,292.0	2,292.0	4.2	4.2	-120.87	-202.9	-339.5	395.5	388.3	7.23	54.707		
2,400.0	2,400.0	2,392.0	2,392.0	4.3	4.3	-120.87	-202.9	-339.5	395.5	388.2	7.33	53.944		
2,500.0	2,500.0	2,492.0	2,492.0	4.4	4.4	-120.87	-202.9	-339.5	395.5	388.1	7.44	53.180 CC, ES		
2,600.0	2,600.0	2,585.1	2,585.1	4.5	4.5	-120.72	-202.4	-340.6	396.3	388.8	7.52	52.707		
2,700.0	2,700.0	2,677.5	2,677.3	4.6	4.5	-120.23	-200.8	-344.5	399.0	391.4	7.57	52.713		
2,800.0	2,800.0	2,771.1	2,770.7	4.7	4.6	-119.40	-197.9	-351.2	403.6	396.0	7.61	53.059		
2,900.0	2,900.0	2,870.7	2,869.9	4.8	4.6	-118.43	-194.4	-359.1	409.0	401.3	7.65	53.475		
3,000.0	3,000.0	2,970.3	2,969.2	4.9	4.7	-117.48	-191.0	-367.1	414.4	406.7	7.69	53.877		
3,100.0	3,100.0	3,069.9	3,068.4	5.0	4.8	-116.56	-187.5	-375.1	420.0	412.3	7.74	54.256		
3,200.0	3,200.0	3,169.6	3,167.7	5.1	4.8	-115.67	-184.1	-383.0	425.7	417.9	7.79	54.611		
3,300.0	3,300.0	3,269.2	3,266.9	5.2	4.9	-114.79	-180.6	-391.0	431.4	423.6	7.85	54.941		
3,400.0	3,400.0	3,368.8	3,366.1	5.3	5.0	-113.94	-177.2	-399.0	437.3	429.4	7.92	55.243		
3,500.0	3,500.0	3,468.4	3,465.4	5.4	5.1	-113.12	-173.7	-406.9	443.3	435.3	7.98	55.518		
3,600.0	3,600.0	3,568.0	3,564.6	5.5	5.1	-112.31	-170.3	-414.9	449.3	441.3	8.06	55.763		
3,700.0	3,700.0	3,667.7	3,663.9	5.7	5.2	-111.53	-166.8	-422.9	455.4	447.3	8.14	55.980		
3,800.0	3,800.0	3,767.3	3,763.1	5.8	5.3	-110.76	-163.3	-430.8	461.7	453.4	8.22	56.169		
3,900.0	3,900.0	3,866.9	3,862.3	5.9	5.4	-110.02	-159.9	-438.8	468.0	459.7	8.31	56.329		
4,000.0	4,000.0	3,966.5	3,961.6	6.0	5.5	-109.30	-156.4	-446.8	474.3	465.9	8.40	56.462		
4,100.0	4,100.0	4,066.1	4,060.8	6.1	5.6	-108.60	-153.0	-454.7	480.8	472.3	8.50	56.569		
4,200.0	4,200.0	4,165.8	4,160.1	6.2	5.6	-107.91	-149.5	-462.7	487.3	478.7	8.60	56.650		
4,300.0	4,300.0	4,265.4	4,259.3	6.3	5.7	-107.24	-146.1	-470.7	493.9	485.2	8.71	56.708		
4,400.0	4,400.0	4,365.0	4,358.5	6.5	5.8	-106.59	-142.6	-478.6	500.6	491.7	8.82	56.742		
4,500.0	4,500.0	4,464.6	4,457.8	6.6	5.9	-105.96	-139.2	-486.6	507.3	498.3	8.94	56.756		
4,600.0	4,600.0	4,564.2	4,557.0	6.7	6.0	-105.35	-135.7	-494.6	514.0	505.0	9.06	56.751		
4,700.0	4,700.0	4,663.9	4,656.3	6.8	6.1	-104.75	-132.3	-502.5	520.9	511.7	9.18	56.727		
4,800.0	4,800.0	4,763.5	4,755.5	6.9	6.2	-104.16	-128.8	-510.5	527.8	518.5	9.31	56.687		
4,900.0	4,900.0	4,863.1	4,854.7	7.0	6.3	-103.59	-125.4	-518.5	534.7	525.3	9.44	56.631		
5,000.0	5,000.0	4,962.7	4,954.0	7.2	6.4	-103.04	-121.9	-526.4	541.7	532.1	9.58	56.562		

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

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Reference Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	CABO WABO FED COM #705H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design CABO WABO FEDERAL PROJECT (ATLAS 2529) - CABO WABO FED COM #504H - OWB - PWP0													Offset Site Error:	3.0 usft
Survey Program: 0-Standard Keeper 104, 8556-MWD+IFR1+FDIR													Offset Well Error:	3.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	5,100.0	5,062.3	5,053.2	7.3	6.5	-102.50		-118.5	-534.4	548.7	539.0	9.72	56.481	
5,200.0	5,200.0	5,162.0	5,152.5	7.4	6.6	-101.97		-115.0	-542.4	555.8	546.0	9.86	56.389	
5,300.0	5,300.0	5,261.6	5,251.7	7.5	6.7	-101.46		-111.6	-550.3	563.0	553.0	10.00	56.287	
5,400.0	5,400.0	5,361.2	5,350.9	7.6	6.8	-100.96		-108.1	-558.3	570.1	560.0	10.15	56.176	
5,500.0	5,500.0	5,460.8	5,450.2	7.8	6.9	-100.47		-104.7	-566.3	577.4	567.1	10.30	56.058	
5,600.0	5,600.0	5,560.5	5,549.5	7.8	7.0	-0.61		-101.2	-574.2	582.9	572.5	10.44	55.839	
5,700.0	5,699.8	5,660.4	5,649.0	7.9	7.1	-0.14		-97.7	-582.2	585.0	574.4	10.57	55.337	
5,722.3	5,722.1	5,682.7	5,671.2	7.9	7.2	-0.04		-97.0	-584.0	585.0	574.4	10.60	55.177	
5,800.0	5,799.5	5,760.3	5,748.5	7.9	7.3	0.32		-94.3	-590.2	584.6	573.9	10.71	54.585	
5,900.0	5,899.2	5,860.2	5,848.0	7.9	7.4	0.78		-90.8	-598.2	584.3	573.4	10.86	53.810	
6,000.0	5,998.9	5,960.1	5,947.5	7.9	7.5	1.25		-87.4	-606.2	583.9	572.9	11.01	53.024	
6,100.0	6,098.6	6,060.0	6,047.0	8.0	7.6	1.71		-83.9	-614.2	583.6	572.5	11.17	52.229	
6,200.0	6,198.3	6,159.8	6,146.6	8.0	7.7	2.17		-80.4	-622.2	583.4	572.0	11.34	51.429	
6,300.0	6,298.0	6,259.7	6,246.1	8.0	7.8	2.64		-77.0	-630.2	583.1	571.6	11.52	50.626	
6,400.0	6,397.7	6,359.6	6,345.6	8.1	7.9	3.10		-73.5	-638.1	583.0	571.3	11.70	49.823	
6,500.0	6,497.4	6,459.5	6,445.1	8.1	8.0	3.57		-70.0	-646.1	582.8	570.9	11.89	49.022	
6,600.0	6,597.1	6,559.4	6,544.6	8.2	8.1	4.04		-66.6	-654.1	582.7	570.6	12.08	48.225	
6,700.0	6,696.8	6,659.3	6,644.1	8.2	8.3	4.50		-63.1	-662.1	582.6	570.4	12.28	47.434	
6,800.0	6,796.5	6,759.2	6,743.6	8.2	8.4	4.97		-59.7	-670.1	582.6	570.1	12.49	46.651	
6,824.4	6,820.8	6,783.5	6,767.8	8.3	8.4	5.08		-58.8	-672.0	582.6	570.1	12.54	46.461	
6,900.0	6,896.2	6,859.1	6,843.1	8.3	8.5	5.43		-56.2	-678.1	582.6	569.9	12.70	45.877	
7,000.0	6,995.9	6,958.9	6,942.6	8.3	8.6	5.90		-52.7	-686.1	582.7	569.8	12.92	45.114	
7,100.0	7,095.6	7,058.8	7,042.1	8.4	8.7	6.36		-49.3	-694.1	582.8	569.6	13.14	44.363	
7,200.0	7,195.3	7,158.7	7,141.6	8.5	8.8	6.83		-45.8	-702.0	582.9	569.5	13.36	43.625	
7,300.0	7,295.0	7,258.6	7,241.1	8.5	9.0	7.30		-42.3	-710.0	583.0	569.5	13.59	42.901	
7,400.0	7,394.7	7,358.5	7,340.6	8.6	9.1	7.76		-38.9	-718.0	583.3	569.4	13.82	42.192	
7,500.0	7,494.4	7,458.4	7,440.1	8.6	9.2	8.22		-35.4	-726.0	583.5	569.4	14.06	41.498	
7,600.0	7,594.1	7,558.3	7,539.7	8.7	9.3	8.69		-32.0	-734.0	583.8	569.5	14.30	40.819	
7,700.0	7,693.8	7,658.2	7,639.2	8.7	9.4	9.15		-28.5	-742.0	584.1	569.5	14.55	40.156	
7,800.0	7,793.5	7,758.0	7,738.7	8.8	9.5	9.62		-25.0	-750.0	584.4	569.7	14.79	39.509	
7,900.0	7,893.2	7,857.9	7,838.2	8.9	9.7	10.08		-21.6	-758.0	584.8	569.8	15.04	38.878	
8,000.0	7,992.9	7,957.8	7,937.7	8.9	9.8	10.54		-18.1	-765.9	585.3	570.0	15.30	38.263	
8,100.0	8,092.6	8,057.7	8,037.2	9.0	9.9	11.00		-14.7	-773.9	585.7	570.2	15.55	37.665	
8,200.0	8,192.3	8,157.6	8,136.7	9.1	10.0	11.46		-11.2	-781.9	586.3	570.4	15.81	37.083	
8,300.0	8,292.0	8,257.5	8,236.2	9.2	10.1	11.92		-7.7	-789.9	586.8	570.7	16.07	36.516	
8,400.0	8,391.7	8,357.4	8,335.7	9.2	10.3	12.38		-4.3	-797.9	587.4	571.1	16.33	35.966	
8,500.0	8,491.4	8,457.3	8,435.2	9.3	10.4	12.84		-0.8	-805.9	588.0	571.4	16.60	35.431	
8,600.0	8,591.1	8,556.2	8,533.8	9.4	10.5	13.29		2.6	-813.8	588.7	571.8	16.83	34.980	
8,700.0	8,690.8	8,645.1	8,622.1	9.5	10.5	13.03		-1.1	-822.3	590.4	573.4	16.94	34.842	
8,800.0	8,790.5	8,730.4	8,705.1	9.5	10.5	11.56		-17.2	-832.7	594.4	577.4	16.99	34.975	
8,900.0	8,890.2	8,809.4	8,778.9	9.6	10.6	9.17		-42.8	-844.4	601.8	584.7	17.07	35.262	
9,000.0	8,989.9	8,880.3	8,841.4	9.7	10.6	6.29		-74.2	-856.1	614.1	596.8	17.30	35.504	
9,100.0	9,089.6	8,942.5	8,892.4	9.8	10.6	3.26		-107.8	-867.4	632.9	615.0	17.82	35.515	
9,200.0	9,189.3	9,000.0	8,936.0	9.9	10.7	0.14		-143.6	-878.4	659.2	640.6	18.63	35.375	
9,300.0	9,289.0	9,050.0	8,970.7	10.0	10.8	-2.76		-178.2	-888.4	693.7	673.9	19.76	35.097	
9,400.0	9,388.7	9,081.8	8,991.1	10.0	10.8	-4.66		-201.7	-894.9	736.0	714.7	21.31	34.541	
9,500.0	9,488.4	9,115.8	9,011.3	10.1	10.9	-6.73		-228.1	-902.0	785.8	763.0	22.79	34.477 SF	
9,600.0	9,588.1	9,150.0	9,030.1	10.2	10.9	-8.82		-255.7	-909.2	842.4	818.2	24.19	34.826	
9,700.0	9,687.8	9,170.5	9,040.5	10.3	11.0	-10.07		-272.9	-913.6	904.8	879.1	25.65	35.271	
9,800.0	9,787.5	9,200.0	9,054.3	10.4	11.0	-11.86		-298.1	-919.9	972.3	945.4	26.85	36.207	

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Reference Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	CABO WABO FED COM #705H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design CABO WABO FEDERAL PROJECT (ATLAS 2529) - CABO WABO FED COM #704H - OWB - PWP1													Offset Site Error:	3.0 usft
Survey Program: 0-Standard Keeper 104, 10158-MWD+IFR1+FDIR													Offset Well Error:	3.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	3.0	3.0	89.45	0.3	30.0	30.0					
100.0	100.0	100.0	100.0	3.0	3.0	89.45	0.3	30.0	30.0	24.0	6.00	5.000		
200.0	200.0	200.0	200.0	3.0	3.0	89.45	0.3	30.0	30.0	24.0	6.00	4.998		
300.0	300.0	300.0	300.0	3.0	3.0	89.45	0.3	30.0	30.0	24.0	6.01	4.993		
400.0	400.0	400.0	400.0	3.0	3.0	89.45	0.3	30.0	30.0	24.0	6.02	4.985		
500.0	500.0	500.0	500.0	3.1	3.1	89.45	0.3	30.0	30.0	24.0	6.03	4.975		
600.0	600.0	600.0	600.0	3.1	3.1	89.45	0.3	30.0	30.0	24.0	6.05	4.962		
700.0	700.0	700.0	700.0	3.1	3.1	89.45	0.3	30.0	30.0	23.9	6.07	4.946		
800.0	800.0	800.0	800.0	3.2	3.2	89.45	0.3	30.0	30.0	23.9	6.09	4.928		
900.0	900.0	900.0	900.0	3.2	3.2	89.45	0.3	30.0	30.0	23.9	6.11	4.908		
1,000.0	1,000.0	1,000.0	1,000.0	3.2	3.2	89.45	0.3	30.0	30.0	23.9	6.14	4.886		
1,100.0	1,100.0	1,100.0	1,100.0	3.3	3.3	89.45	0.3	30.0	30.0	23.8	6.17	4.861		
1,200.0	1,200.0	1,200.0	1,200.0	3.4	3.4	89.45	0.3	30.0	30.0	23.8	6.21	4.834		
1,300.0	1,300.0	1,300.0	1,300.0	3.4	3.4	89.45	0.3	30.0	30.0	23.8	6.24	4.805		
1,400.0	1,400.0	1,400.0	1,400.0	3.5	3.5	89.45	0.3	30.0	30.0	23.7	6.28	4.775		
1,500.0	1,500.0	1,500.0	1,500.0	3.5	3.5	89.45	0.3	30.0	30.0	23.7	6.33	4.742		
1,600.0	1,600.0	1,600.0	1,600.0	3.6	3.6	89.45	0.3	30.0	30.0	23.6	6.37	4.708		
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	89.45	0.3	30.0	30.0	23.6	6.42	4.673		
1,800.0	1,800.0	1,800.0	1,800.0	3.8	3.8	89.45	0.3	30.0	30.0	23.5	6.47	4.636		
1,900.0	1,900.0	1,900.0	1,900.0	3.9	3.9	89.45	0.3	30.0	30.0	23.5	6.53	4.598		
2,000.0	2,000.0	2,000.0	2,000.0	3.9	3.9	89.45	0.3	30.0	30.0	23.4	6.58	4.559		
2,100.0	2,100.0	2,100.0	2,100.0	4.0	4.0	89.45	0.3	30.0	30.0	23.4	6.64	4.518		
2,200.0	2,200.0	2,200.0	2,200.0	4.1	4.1	89.45	0.3	30.0	30.0	23.3	6.70	4.477		
2,300.0	2,300.0	2,300.0	2,300.0	4.2	4.2	89.45	0.3	30.0	30.0	23.2	6.76	4.435		
2,400.0	2,400.0	2,400.0	2,400.0	4.3	4.3	89.45	0.3	30.0	30.0	23.2	6.83	4.393		
2,500.0	2,500.0	2,500.0	2,500.0	4.4	4.4	89.45	0.3	30.0	30.0	23.1	6.90	4.350 CC, ES, SF		
2,600.0	2,600.0	2,598.9	2,598.9	4.5	4.5	88.94	0.6	31.7	31.7	24.7	6.97	4.550		
2,700.0	2,700.0	2,698.0	2,697.9	4.6	4.5	87.73	1.4	36.6	36.7	29.6	7.05	5.202		
2,800.0	2,800.0	2,797.9	2,797.5	4.7	4.6	86.67	2.5	42.3	42.5	35.3	7.14	5.947		
2,900.0	2,900.0	2,897.7	2,897.2	4.8	4.6	85.86	3.5	48.1	48.3	41.0	7.24	6.668		
3,000.0	3,000.0	2,997.5	2,996.9	4.9	4.7	85.23	4.5	53.8	54.1	46.7	7.34	7.365		
3,100.0	3,100.0	3,097.3	3,096.5	5.0	4.7	84.72	5.5	59.6	59.9	52.5	7.45	8.037		
3,200.0	3,200.0	3,197.2	3,196.2	5.1	4.8	84.30	6.5	65.3	65.7	58.2	7.57	8.686		
3,300.0	3,300.0	3,297.0	3,295.8	5.2	4.8	83.95	7.5	71.0	71.6	63.9	7.69	9.310		
3,400.0	3,400.0	3,396.8	3,395.5	5.3	4.9	83.65	8.5	76.8	77.4	69.6	7.81	9.911		
3,500.0	3,500.0	3,496.7	3,495.1	5.4	5.0	83.40	9.6	82.5	83.2	75.3	7.94	10.489		
3,600.0	3,600.0	3,596.5	3,594.8	5.5	5.0	83.17	10.6	88.3	89.1	81.0	8.06	11.044		
3,700.0	3,700.0	3,696.3	3,694.5	5.7	5.1	82.98	11.6	94.0	94.9	86.7	8.20	11.577		
3,800.0	3,800.0	3,796.1	3,794.1	5.8	5.2	82.81	12.6	99.8	100.7	92.4	8.33	12.089		
3,900.0	3,900.0	3,896.0	3,893.8	5.9	5.2	82.65	13.6	105.5	106.6	98.1	8.47	12.581		
4,000.0	4,000.0	3,995.8	3,993.4	6.0	5.3	82.51	14.6	111.3	112.4	103.8	8.61	13.053		
4,100.0	4,100.0	4,095.6	4,093.1	6.1	5.4	82.39	15.6	117.0	118.2	109.5	8.76	13.506		
4,200.0	4,200.0	4,195.5	4,192.8	6.2	5.5	82.28	16.6	122.8	124.1	115.2	8.90	13.941		
4,300.0	4,300.0	4,295.3	4,292.4	6.3	5.6	82.18	17.7	128.5	129.9	120.9	9.05	14.358		
4,400.0	4,400.0	4,395.1	4,392.1	6.5	5.7	82.08	18.7	134.2	135.8	126.6	9.20	14.758		
4,500.0	4,500.0	4,494.9	4,491.7	6.6	5.7	82.00	19.7	140.0	141.6	132.3	9.35	15.142		
4,600.0	4,600.0	4,594.8	4,591.4	6.7	5.8	81.92	20.7	145.7	147.4	137.9	9.51	15.511		
4,700.0	4,700.0	4,694.6	4,691.0	6.8	5.9	81.84	21.7	151.5	153.3	143.6	9.66	15.865		
4,800.0	4,800.0	4,794.4	4,790.7	6.9	6.0	81.78	22.7	157.2	159.1	149.3	9.82	16.205		
4,900.0	4,900.0	4,894.3	4,890.4	7.0	6.1	81.71	23.7	163.0	165.0	155.0	9.98	16.531		
5,000.0	5,000.0	4,994.1	4,990.0	7.2	6.2	81.65	24.7	168.7	170.8	160.7	10.14	16.845		

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

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Reference Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	CABO WABO FED COM #705H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design CABO WABO FEDERAL PROJECT (ATLAS 2529) - CABO WABO FED COM #704H - OWB - PWP1												Offset Site Error:	3.0 usft	
Survey Program: 0-Standard Keeper 104, 10158-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	5,100.0	5,093.9	5,089.7	7.3	6.3	81.60		25.8	174.5	176.6	166.3	10.30	17.146	
5,200.0	5,200.0	5,193.8	5,189.3	7.4	6.4	81.55		26.8	180.2	182.5	172.0	10.47	17.436	
5,300.0	5,300.0	5,293.6	5,289.0	7.5	6.5	81.50		27.8	185.9	188.3	177.7	10.63	17.714	
5,400.0	5,400.0	5,393.4	5,388.7	7.6	6.6	81.46		28.8	191.7	194.2	183.4	10.80	17.982	
5,500.0	5,500.0	5,493.2	5,488.3	7.8	6.7	81.41		29.8	197.4	200.0	189.0	10.97	18.240	
5,600.0	5,600.0	5,592.9	5,587.9	7.8	6.8	-179.24		30.8	203.2	207.6	196.5	11.12	18.663	
5,700.0	5,699.8	5,692.3	5,687.1	7.9	6.9	-179.30		31.8	208.9	218.7	207.4	11.27	19.394	
5,722.3	5,722.1	5,714.4	5,709.1	7.9	6.9	-179.31		32.1	210.2	221.6	210.3	11.31	19.596	
5,800.0	5,799.5	5,791.4	5,786.0	7.9	7.0	-179.35		32.8	214.6	232.1	220.7	11.43	20.312	
5,900.0	5,899.2	5,890.5	5,884.9	7.9	7.1	-179.40		33.8	220.3	245.7	234.1	11.59	21.206	
6,000.0	5,998.9	5,989.6	5,983.8	7.9	7.2	-179.45		34.8	226.0	259.3	247.5	11.75	22.071	
6,100.0	6,098.6	6,088.6	6,082.7	8.0	7.3	-179.49		35.9	231.7	272.8	260.9	11.91	22.906	
6,200.0	6,198.3	6,187.7	6,181.6	8.0	7.4	-179.52		36.9	237.4	286.4	274.3	12.08	23.713	
6,300.0	6,298.0	6,286.8	6,280.5	8.0	7.5	-179.56		37.9	243.1	299.9	287.7	12.25	24.491	
6,400.0	6,397.7	6,385.9	6,379.4	8.1	7.6	-179.59		38.9	248.8	313.5	301.1	12.42	25.242	
6,500.0	6,497.4	6,484.9	6,478.3	8.1	7.7	-179.62		39.9	254.5	327.1	314.5	12.60	25.967	
6,600.0	6,597.1	6,584.0	6,577.2	8.2	7.8	-179.64		40.9	260.2	340.6	327.9	12.77	26.666	
6,700.0	6,696.8	6,683.1	6,676.1	8.2	7.9	-179.67		41.9	265.9	354.2	341.2	12.96	27.340	
6,800.0	6,796.5	6,782.2	6,775.0	8.2	8.1	-179.69		42.9	271.6	367.8	354.6	13.14	27.990	
6,900.0	6,896.2	6,881.2	6,874.0	8.3	8.2	-179.71		43.9	277.3	381.3	368.0	13.33	28.616	
7,000.0	6,995.9	6,980.3	6,972.9	8.3	8.3	-179.73		44.9	283.0	394.9	381.4	13.51	29.220	
7,100.0	7,095.6	7,079.4	7,071.8	8.4	8.4	-179.75		45.9	288.7	408.5	394.8	13.71	29.801	
7,200.0	7,195.3	7,178.5	7,170.7	8.5	8.5	-179.76		46.9	294.4	422.0	408.1	13.90	30.362	
7,300.0	7,295.0	7,277.6	7,269.6	8.5	8.6	-179.78		47.9	300.1	435.6	421.5	14.10	30.903	
7,400.0	7,394.7	7,376.6	7,368.5	8.6	8.7	-179.79		48.9	305.8	449.1	434.9	14.29	31.423	
7,500.0	7,494.4	7,475.7	7,467.4	8.6	8.8	-179.81		49.9	311.5	462.7	448.2	14.49	31.925	
7,600.0	7,594.1	7,574.8	7,566.3	8.7	9.0	-179.82		50.9	317.2	476.3	461.6	14.70	32.409	
7,700.0	7,693.8	7,673.9	7,665.2	8.7	9.1	-179.83		51.9	322.9	489.8	474.9	14.90	32.876	
7,800.0	7,793.5	7,772.9	7,764.1	8.8	9.2	-179.84		52.9	328.6	503.4	488.3	15.11	33.326	
7,900.0	7,893.2	7,872.0	7,863.0	8.9	9.3	-179.85		54.0	334.3	517.0	501.7	15.31	33.759	
8,000.0	7,992.9	7,971.1	7,961.9	8.9	9.4	-179.86		55.0	340.0	530.5	515.0	15.52	34.177	
8,100.0	8,092.6	8,070.2	8,060.8	9.0	9.5	-179.87		56.0	345.7	544.1	528.4	15.73	34.581	
8,200.0	8,192.3	8,169.2	8,159.7	9.1	9.6	-179.88		57.0	351.4	557.7	541.7	15.95	34.970	
8,300.0	8,292.0	8,268.3	8,258.6	9.2	9.8	-179.89		58.0	357.1	571.2	555.1	16.16	35.346	
8,400.0	8,391.7	8,367.4	8,357.5	9.2	9.9	-179.90		59.0	362.8	584.8	568.4	16.38	35.708	
8,500.0	8,491.4	8,466.5	8,456.5	9.3	10.0	-179.91		60.0	368.5	598.4	581.8	16.59	36.058	
8,600.0	8,591.1	8,565.5	8,555.4	9.4	10.1	-179.92		61.0	374.2	611.9	595.1	16.81	36.395	
8,700.0	8,690.8	8,664.6	8,654.3	9.5	10.2	-179.93		62.0	379.9	625.5	608.4	17.03	36.721	
8,800.0	8,790.5	8,763.7	8,753.2	9.5	10.3	-179.93		63.0	385.6	639.0	621.8	17.25	37.036	
8,900.0	8,890.2	8,862.8	8,852.1	9.6	10.5	-179.94		64.0	391.3	652.6	635.1	17.48	37.341	
9,000.0	8,989.9	8,961.8	8,951.0	9.7	10.6	-179.95		65.0	397.0	666.2	648.5	17.70	37.635	
9,100.0	9,089.6	9,060.9	9,049.9	9.8	10.7	-179.95		66.0	402.7	679.7	661.8	17.93	37.919	
9,200.0	9,189.3	9,160.0	9,148.8	9.9	10.8	-179.96		67.0	408.4	693.3	675.1	18.15	38.194	
9,300.0	9,289.0	9,259.1	9,247.7	10.0	10.9	-179.96		68.0	414.1	706.9	688.5	18.38	38.459	
9,400.0	9,388.7	9,358.1	9,346.6	10.0	11.1	-179.97		69.0	419.9	720.4	701.8	18.61	38.716	
9,500.0	9,488.4	9,457.2	9,445.5	10.1	11.2	-179.98		70.0	425.6	734.0	715.2	18.84	38.965	
9,600.0	9,588.1	9,556.3	9,544.4	10.2	11.3	-179.98		71.0	431.3	747.6	728.5	19.07	39.205	
9,700.0	9,687.8	9,655.4	9,643.3	10.3	11.4	-179.99		72.0	437.0	761.1	741.8	19.30	39.438	
9,800.0	9,787.5	9,754.4	9,742.2	10.4	11.5	-179.99		73.1	442.7	774.7	755.2	19.53	39.664	
9,900.0	9,887.2	9,853.5	9,841.1	10.5	11.7	-180.00		74.1	448.4	788.3	768.5	19.76	39.882	
10,000.0	9,986.9	9,952.6	9,940.1	10.6	11.8	-180.00		75.1	454.1	801.8	781.8	20.00	40.094	

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

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Reference Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	CABO WABO FED COM #705H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design CABO WABO FEDERAL PROJECT (ATLAS 2529) - CABO WABO FED COM #704H - OWB - PWP1													Offset Site Error:	3.0 usft
Survey Program: 0-Standard Keeper 104, 10158-MWD+IFR1+FDIR													Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis		Distance										Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,100.0	10,086.6	10,051.7	10,039.0	10.7	11.9	180.00	76.1	459.8	815.4	795.0	20.36	40.042		
10,152.2	10,138.7	10,103.4	10,090.6	10.7	12.0	179.99	76.6	462.7	822.5	802.0	20.44	40.243		
10,200.0	10,186.2	10,150.7	10,137.8	10.7	12.0	-137.30	77.1	465.5	829.2	808.8	20.48	40.487		
10,250.0	10,235.6	10,212.8	10,199.7	10.7	12.0	-121.00	75.1	469.0	836.7	816.2	20.44	40.937		
10,300.0	10,284.1	10,278.1	10,264.2	10.7	12.0	-113.72	65.9	472.8	843.8	823.4	20.40	41.362		
10,350.0	10,331.5	10,344.1	10,327.9	10.7	12.0	-109.54	49.1	476.6	850.6	830.2	20.39	41.706		
10,400.0	10,377.4	10,410.6	10,389.7	10.7	12.1	-106.69	25.0	480.3	856.9	836.5	20.43	41.950		
10,450.0	10,421.4	10,477.3	10,448.5	10.8	12.1	-104.52	-6.3	483.9	862.8	842.3	20.50	42.087		
10,500.0	10,463.3	10,543.9	10,503.2	10.8	12.1	-102.72	-44.2	487.3	868.1	847.5	20.61	42.115		
10,550.0	10,502.5	10,610.2	10,552.9	10.9	12.2	-101.14	-87.9	490.4	872.8	852.1	20.76	42.038		
10,600.0	10,539.0	10,676.0	10,596.8	10.9	12.3	-99.71	-136.6	493.3	877.0	856.1	20.95	41.865		
10,650.0	10,572.4	10,740.8	10,634.5	11.0	12.4	-98.37	-189.4	495.8	880.6	859.4	21.16	41.608		
10,700.0	10,602.4	10,804.7	10,665.5	11.1	12.5	-97.11	-245.1	497.9	883.6	862.2	21.41	41.275		
10,750.0	10,628.8	10,867.4	10,689.7	11.2	12.6	-95.92	-302.9	499.7	886.0	864.3	21.68	40.863		
10,800.0	10,651.5	10,928.7	10,707.2	11.2	12.7	-94.79	-361.6	501.0	887.9	865.9	21.98	40.390		
10,850.0	10,670.1	10,988.6	10,718.1	11.3	12.9	-93.71	-420.5	502.0	889.2	866.9	22.31	39.859		
10,900.0	10,684.7	11,047.1	10,722.8	11.4	13.1	-92.69	-478.8	502.7	890.0	867.4	22.66	39.275		
10,950.0	10,695.1	11,098.5	10,723.1	11.5	13.2	-91.89	-530.1	503.0	890.4	867.4	23.02	38.684		
11,000.0	10,701.2	11,148.1	10,723.1	11.6	13.4	-91.43	-579.8	503.3	890.7	867.3	23.41	38.050		
11,044.7	10,703.0	11,192.7	10,723.2	11.7	13.5	-91.30	-624.4	503.6	890.8	867.1	23.77	37.477		
11,100.0	10,703.1	11,248.1	10,723.3	11.9	13.7	-91.30	-679.7	503.9	890.8	866.6	24.25	36.734		
11,200.0	10,703.2	11,348.1	10,723.4	12.2	14.1	-91.30	-779.7	504.6	890.8	865.7	25.19	35.368		
11,300.0	10,703.3	11,448.1	10,723.6	12.5	14.6	-91.31	-879.7	505.2	890.8	864.6	26.21	33.995		
11,400.0	10,703.4	11,548.1	10,723.8	13.0	15.1	-91.31	-979.7	505.8	890.8	863.6	27.29	32.639		
11,500.0	10,703.5	11,648.1	10,723.9	13.5	15.6	-91.31	-1,079.7	506.5	890.8	862.4	28.45	31.317		
11,600.0	10,703.6	11,748.1	10,724.1	14.0	16.1	-91.32	-1,179.7	507.1	890.8	861.2	29.65	30.041		
11,700.0	10,703.7	11,848.1	10,724.2	14.6	16.7	-91.32	-1,279.7	507.7	890.9	859.9	30.91	28.820		
11,800.0	10,703.8	11,948.1	10,724.4	15.2	17.3	-91.32	-1,379.7	508.3	890.9	858.6	32.21	27.656		
11,900.0	10,703.9	12,048.1	10,724.5	15.9	18.0	-91.33	-1,479.7	509.0	890.9	857.3	33.55	26.553		
12,000.0	10,704.0	12,148.1	10,724.7	16.5	18.6	-91.33	-1,579.7	509.6	890.9	855.9	34.92	25.510		
12,100.0	10,704.1	12,248.1	10,724.8	17.2	19.3	-91.33	-1,679.7	510.2	890.9	854.5	36.32	24.525		
12,200.0	10,704.2	12,348.1	10,725.0	18.0	20.0	-91.34	-1,779.7	510.9	890.9	853.1	37.75	23.597		
12,300.0	10,704.3	12,448.1	10,725.1	18.7	20.7	-91.34	-1,879.7	511.5	890.9	851.7	39.21	22.723		
12,400.0	10,704.4	12,548.1	10,725.3	19.4	21.4	-91.34	-1,979.7	512.1	890.9	850.2	40.68	21.900		
12,500.0	10,704.5	12,648.1	10,725.5	20.2	22.1	-91.35	-2,079.7	512.7	890.9	848.7	42.17	21.125		
12,600.0	10,704.6	12,748.1	10,725.6	20.9	22.9	-91.35	-2,179.7	513.4	890.9	847.2	43.68	20.395		
12,700.0	10,704.7	12,848.1	10,725.8	21.7	23.6	-91.35	-2,279.7	514.0	890.9	845.7	45.21	19.707		
12,800.0	10,704.8	12,948.1	10,725.9	22.5	24.4	-91.36	-2,379.7	514.6	890.9	844.1	46.74	19.058		
12,900.0	10,704.9	13,048.1	10,726.1	23.3	25.1	-91.36	-2,479.7	515.3	890.9	842.6	48.30	18.446		
13,000.0	10,705.0	13,148.1	10,726.2	24.0	25.9	-91.36	-2,579.7	515.9	890.9	841.0	49.86	17.868		
13,100.0	10,705.1	13,248.1	10,726.4	24.8	26.7	-91.37	-2,679.7	516.5	890.9	839.4	51.43	17.322		
13,200.0	10,705.2	13,348.1	10,726.5	25.6	27.4	-91.37	-2,779.7	517.1	890.9	837.9	53.01	16.805		
13,300.0	10,705.4	13,448.1	10,726.7	26.4	28.2	-91.37	-2,879.7	517.8	890.9	836.3	54.60	16.315		
13,400.0	10,705.5	13,548.1	10,726.8	27.2	29.0	-91.38	-2,979.7	518.4	890.9	834.7	56.20	15.851		
13,500.0	10,705.6	13,648.1	10,727.0	28.1	29.8	-91.38	-3,079.7	519.0	890.9	833.1	57.81	15.411		
13,600.0	10,705.7	13,748.1	10,727.1	28.9	30.6	-91.38	-3,179.7	519.7	890.9	831.5	59.42	14.993		
13,700.0	10,705.8	13,848.1	10,727.3	29.7	31.4	-91.39	-3,279.7	520.3	890.9	829.8	61.04	14.595		
13,800.0	10,705.9	13,948.1	10,727.5	30.5	32.2	-91.39	-3,379.7	520.9	890.9	828.2	62.66	14.217		
13,900.0	10,706.0	14,048.1	10,727.6	31.3	33.0	-91.39	-3,479.7	521.5	890.9	826.6	64.29	13.857		
14,000.0	10,706.1	14,148.1	10,727.8	32.1	33.8	-91.39	-3,579.6	522.2	890.9	825.0	65.93	13.513		
14,100.0	10,706.2	14,248.1	10,727.9	33.0	34.6	-91.40	-3,679.6	522.8	890.9	823.3	67.56	13.186		

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

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Reference Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	CABO WABO FED COM #705H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design CABO WABO FEDERAL PROJECT (ATLAS 2529) - CABO WABO FED COM #704H - OWB - PWP1												Offset Site Error:	3.0 usft
Survey Program: 0-Standard Keeper 104, 10158-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,200.0	10,706.3	14,348.1	10,728.1	33.8	35.4	-91.40	-3,779.6	523.4	890.9	821.7	69.21	12.873	
14,300.0	10,706.4	14,448.1	10,728.2	34.6	36.3	-91.40	-3,879.6	524.1	890.9	820.0	70.85	12.574	
14,400.0	10,706.5	14,548.1	10,728.4	35.5	37.1	-91.41	-3,979.6	524.7	890.9	818.4	72.50	12.288	
14,500.0	10,706.6	14,648.1	10,728.5	36.3	37.9	-91.41	-4,079.6	525.3	890.9	816.7	74.16	12.014	
14,600.0	10,706.7	14,748.1	10,728.7	37.1	38.7	-91.41	-4,179.6	526.0	890.9	815.1	75.81	11.751	
14,700.0	10,706.8	14,848.1	10,728.8	38.0	39.5	-91.42	-4,279.6	526.6	890.9	813.4	77.47	11.499	
14,800.0	10,706.9	14,948.1	10,729.0	38.8	40.4	-91.42	-4,379.6	527.2	890.9	811.8	79.14	11.258	
14,900.0	10,707.0	15,048.1	10,729.2	39.6	41.2	-91.42	-4,479.6	527.8	890.9	810.1	80.80	11.026	
15,000.0	10,707.1	15,148.1	10,729.3	40.5	42.0	-91.43	-4,579.6	528.5	890.9	808.4	82.47	10.803	
15,100.0	10,707.2	15,248.1	10,729.5	41.3	42.9	-91.43	-4,679.6	529.1	890.9	806.8	84.14	10.589	
15,200.0	10,707.3	15,348.1	10,729.6	42.1	43.7	-91.43	-4,779.6	529.7	890.9	805.1	85.81	10.383	
15,300.0	10,707.4	15,448.1	10,729.8	43.0	44.5	-91.44	-4,879.6	530.4	890.9	803.4	87.48	10.184	
15,400.0	10,707.5	15,548.1	10,729.9	43.8	45.3	-91.44	-4,979.6	531.0	890.9	801.8	89.16	9.993	
15,500.0	10,707.6	15,648.1	10,730.1	44.7	46.2	-91.44	-5,079.6	531.6	890.9	800.1	90.84	9.808	
15,600.0	10,707.8	15,748.1	10,730.2	45.5	47.0	-91.45	-5,179.6	532.2	890.9	798.4	92.51	9.630	
15,700.0	10,707.9	15,848.1	10,730.4	46.4	47.9	-91.45	-5,279.6	532.9	890.9	796.7	94.20	9.458	
15,800.0	10,708.0	15,948.1	10,730.5	47.2	48.7	-91.45	-5,379.6	533.5	890.9	795.0	95.88	9.292	
15,900.0	10,708.1	16,048.1	10,730.7	48.1	49.5	-91.46	-5,479.6	534.1	890.9	793.4	97.56	9.132	
16,000.0	10,708.2	16,148.1	10,730.9	48.9	50.4	-91.46	-5,579.6	534.8	890.9	791.7	99.25	8.977	
16,100.0	10,708.3	16,248.1	10,731.0	49.7	51.2	-91.46	-5,679.6	535.4	890.9	790.0	100.93	8.827	
16,200.0	10,708.4	16,348.1	10,731.2	50.6	52.0	-91.47	-5,779.6	536.0	890.9	788.3	102.62	8.682	
16,300.0	10,708.5	16,448.1	10,731.3	51.4	52.9	-91.47	-5,879.6	536.6	890.9	786.6	104.31	8.541	
16,400.0	10,708.6	16,548.1	10,731.5	52.3	53.7	-91.47	-5,979.6	537.3	890.9	784.9	106.00	8.405	
16,500.0	10,708.7	16,648.1	10,731.6	53.1	54.6	-91.48	-6,079.6	537.9	890.9	783.2	107.69	8.273	
16,600.0	10,708.8	16,748.1	10,731.8	54.0	55.4	-91.48	-6,179.6	538.5	890.9	781.6	109.38	8.145	
16,700.0	10,708.9	16,848.1	10,731.9	54.8	56.3	-91.48	-6,279.6	539.2	890.9	779.9	111.08	8.021	
16,800.0	10,709.0	16,948.1	10,732.1	55.7	57.1	-91.48	-6,379.6	539.8	890.9	778.2	112.77	7.901	
16,900.0	10,709.1	17,048.1	10,732.2	56.5	57.9	-91.49	-6,479.6	540.4	890.9	776.5	114.47	7.784	
17,000.0	10,709.2	17,148.1	10,732.4	57.4	58.8	-91.49	-6,579.6	541.0	890.9	774.8	116.16	7.670	
17,100.0	10,709.3	17,248.1	10,732.6	58.2	59.6	-91.49	-6,679.6	541.7	891.0	773.1	117.86	7.560	
17,200.0	10,709.4	17,348.1	10,732.7	59.1	60.5	-91.50	-6,779.6	542.3	891.0	771.4	119.55	7.452	
17,300.0	10,709.5	17,448.1	10,732.9	59.9	61.3	-91.50	-6,879.6	542.9	891.0	769.7	121.25	7.348	
17,400.0	10,709.6	17,548.1	10,733.0	60.8	62.2	-91.50	-6,979.6	543.6	891.0	768.0	122.95	7.246	
17,500.0	10,709.7	17,648.1	10,733.2	61.6	63.0	-91.51	-7,079.6	544.2	891.0	766.3	124.65	7.148	
17,600.0	10,709.8	17,748.1	10,733.3	62.5	63.9	-91.51	-7,179.6	544.8	891.0	764.6	126.35	7.051	
17,700.0	10,709.9	17,848.1	10,733.5	63.4	64.7	-91.51	-7,279.6	545.4	891.0	762.9	128.05	6.958	
17,800.0	10,710.0	17,948.1	10,733.6	64.2	65.6	-91.52	-7,379.6	546.1	891.0	761.2	129.75	6.867	
17,900.0	10,710.2	18,048.1	10,733.8	65.1	66.4	-91.52	-7,479.6	546.7	891.0	759.5	131.46	6.778	
18,000.0	10,710.3	18,148.1	10,733.9	65.9	67.3	-91.52	-7,579.6	547.3	891.0	757.8	133.16	6.691	
18,100.0	10,710.4	18,248.1	10,734.1	66.8	68.1	-91.53	-7,679.6	548.0	891.0	756.1	134.86	6.607	
18,200.0	10,710.5	18,348.1	10,734.3	67.6	69.0	-91.53	-7,779.6	548.6	891.0	754.4	136.57	6.524	
18,300.0	10,710.6	18,448.1	10,734.4	68.5	69.8	-91.53	-7,879.6	549.2	891.0	752.7	138.27	6.444	
18,400.0	10,710.7	18,548.1	10,734.6	69.3	70.7	-91.54	-7,979.6	549.9	891.0	751.0	139.97	6.365	
18,500.0	10,710.8	18,648.1	10,734.7	70.2	71.5	-91.54	-8,079.6	550.5	891.0	749.3	141.68	6.289	
18,600.0	10,710.9	18,748.1	10,734.9	71.0	72.4	-91.54	-8,179.6	551.1	891.0	747.6	143.38	6.214	
18,700.0	10,711.0	18,848.1	10,735.0	71.9	73.2	-91.55	-8,279.6	551.7	891.0	745.9	145.09	6.141	
18,800.0	10,711.1	18,948.1	10,735.2	72.7	74.1	-91.55	-8,379.6	552.4	891.0	744.2	146.80	6.069	
18,900.0	10,711.2	19,048.1	10,735.3	73.6	74.9	-91.55	-8,479.6	553.0	891.0	742.5	148.50	6.000	
19,000.0	10,711.3	19,148.1	10,735.5	74.5	75.8	-91.56	-8,579.6	553.6	891.0	740.8	150.21	5.932	
19,100.0	10,711.4	19,248.1	10,735.6	75.3	76.6	-91.56	-8,679.6	554.3	891.0	739.1	151.92	5.865	
19,200.0	10,711.5	19,348.1	10,735.8	76.2	77.5	-91.56	-8,779.6	554.9	891.0	737.4	153.63	5.800	

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

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Reference Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	CABO WABO FED COM #705H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design CABO WABO FEDERAL PROJECT (ATLAS 2529) - CABO WABO FED COM #704H - OWB - PWP1											Offset Site Error: 3.0 usft		
Survey Program: 0-Standard Keeper 104, 10158-MWD+IFR1+FDIR											Offset Well Error: 3.0 usft		
Reference		Offset		Semi Major Axis			Distance					Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		Separation Factor
19,300.0	10,711.6	19,448.1	10,735.9	77.0	78.3	-91.57	-8,879.5	555.5	891.0	735.7	155.34	5.736	
19,400.0	10,711.7	19,548.1	10,736.1	77.9	79.2	-91.57	-8,979.5	556.1	891.0	734.0	157.04	5.674	
19,500.0	10,711.8	19,648.1	10,736.3	78.7	80.0	-91.57	-9,079.5	556.8	891.0	732.2	158.75	5.612	
19,600.0	10,711.9	19,748.1	10,736.4	79.6	80.9	-91.57	-9,179.5	557.4	891.0	730.5	160.46	5.553	
19,700.0	10,712.0	19,848.1	10,736.6	80.5	81.7	-91.58	-9,279.5	558.0	891.0	728.8	162.17	5.494	
19,800.0	10,712.1	19,948.1	10,736.7	81.3	82.6	-91.58	-9,379.5	558.7	891.0	727.1	163.88	5.437	
19,900.0	10,712.2	20,048.1	10,736.9	82.2	83.4	-91.58	-9,479.5	559.3	891.0	725.4	165.59	5.381	
20,000.0	10,712.3	20,148.1	10,737.0	83.0	84.3	-91.59	-9,579.5	559.9	891.0	723.7	167.30	5.326	
20,100.0	10,712.4	20,248.1	10,737.2	83.9	85.2	-91.59	-9,679.5	560.5	891.0	722.0	169.01	5.272	
20,200.0	10,712.6	20,348.1	10,737.3	84.7	86.0	-91.59	-9,779.5	561.2	891.0	720.3	170.72	5.219	
20,300.0	10,712.7	20,448.1	10,737.5	85.6	86.9	-91.60	-9,879.5	561.8	891.0	718.6	172.44	5.167	
20,400.0	10,712.8	20,548.1	10,737.6	86.5	87.7	-91.60	-9,979.5	562.4	891.0	716.9	174.15	5.116	
20,500.0	10,712.9	20,648.1	10,737.8	87.3	88.6	-91.60	-10,079.5	563.1	891.0	715.2	175.86	5.067	
20,600.0	10,713.0	20,748.1	10,738.0	88.2	89.4	-91.61	-10,179.5	563.7	891.0	713.4	177.57	5.018	
20,628.6	10,713.0	20,776.7	10,738.0	88.3	89.7	-91.61	-10,208.1	563.9	891.0	713.0	177.99	5.006	

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Reference Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	CABO WABO FED COM #705H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design CABO WABO FEDERAL PROJECT (ATLAS 2529) - CABO WABO FED COM #706H - OWB - PWP1												Offset Site Error:	3.0 usft
Survey Program: 0-Standard Keeper 104, 10164-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	3.0	3.0	-90.46	-0.2	-30.0	30.0				
100.0	100.0	99.0	99.0	3.0	3.0	-90.46	-0.2	-30.0	30.0	24.0	6.00	4.993	
200.0	200.0	199.0	199.0	3.0	3.0	-90.46	-0.2	-30.0	30.0	24.0	6.00	4.991	
300.0	300.0	299.0	299.0	3.0	3.0	-90.46	-0.2	-30.0	30.0	24.0	6.01	4.986	
400.0	400.0	399.0	399.0	3.0	3.0	-90.46	-0.2	-30.0	30.0	23.9	6.02	4.978	
500.0	500.0	499.0	499.0	3.1	3.1	-90.46	-0.2	-30.0	30.0	23.9	6.03	4.968	
600.0	600.0	599.0	599.0	3.1	3.1	-90.46	-0.2	-30.0	30.0	23.9	6.05	4.955	
700.0	700.0	699.0	699.0	3.1	3.1	-90.46	-0.2	-30.0	30.0	23.9	6.07	4.940	
800.0	800.0	799.0	799.0	3.2	3.2	-90.46	-0.2	-30.0	30.0	23.9	6.09	4.922	
900.0	900.0	899.0	899.0	3.2	3.2	-90.46	-0.2	-30.0	30.0	23.8	6.11	4.902	
1,000.0	1,000.0	999.0	999.0	3.2	3.2	-90.46	-0.2	-30.0	30.0	23.8	6.14	4.879	
1,100.0	1,100.0	1,099.0	1,099.0	3.3	3.3	-90.46	-0.2	-30.0	30.0	23.8	6.17	4.854	
1,200.0	1,200.0	1,199.0	1,199.0	3.4	3.4	-90.46	-0.2	-30.0	30.0	23.8	6.21	4.828	
1,300.0	1,300.0	1,299.0	1,299.0	3.4	3.4	-90.46	-0.2	-30.0	30.0	23.7	6.24	4.799	
1,400.0	1,400.0	1,399.0	1,399.0	3.5	3.5	-90.46	-0.2	-30.0	30.0	23.7	6.28	4.768	
1,500.0	1,500.0	1,499.0	1,499.0	3.5	3.5	-90.46	-0.2	-30.0	30.0	23.6	6.33	4.736	
1,600.0	1,600.0	1,599.0	1,599.0	3.6	3.6	-90.46	-0.2	-30.0	30.0	23.6	6.37	4.702	
1,700.0	1,700.0	1,699.0	1,699.0	3.7	3.7	-90.46	-0.2	-30.0	30.0	23.5	6.42	4.667	
1,800.0	1,800.0	1,799.0	1,799.0	3.8	3.8	-90.46	-0.2	-30.0	30.0	23.5	6.47	4.630	
1,900.0	1,900.0	1,899.0	1,899.0	3.9	3.9	-90.46	-0.2	-30.0	30.0	23.4	6.52	4.592	
2,000.0	2,000.0	1,999.0	1,999.0	3.9	3.9	-90.46	-0.2	-30.0	30.0	23.4	6.58	4.553	
2,100.0	2,100.0	2,099.0	2,099.0	4.0	4.0	-90.46	-0.2	-30.0	30.0	23.3	6.64	4.513	
2,200.0	2,200.0	2,199.0	2,199.0	4.1	4.1	-90.46	-0.2	-30.0	30.0	23.3	6.70	4.471	
2,300.0	2,300.0	2,299.0	2,299.0	4.2	4.2	-90.46	-0.2	-30.0	30.0	23.2	6.76	4.430	
2,400.0	2,400.0	2,399.0	2,399.0	4.3	4.3	-90.46	-0.2	-30.0	30.0	23.1	6.83	4.387	
2,500.0	2,500.0	2,499.0	2,499.0	4.4	4.4	-90.46	-0.2	-30.0	30.0	23.1	6.90	4.344 CC, ES, SF	
2,600.0	2,600.0	2,597.9	2,597.9	4.5	4.5	-90.88	-0.5	-31.6	31.6	24.7	6.97	4.542	
2,700.0	2,700.0	2,696.7	2,696.5	4.6	4.5	-91.91	-1.2	-36.6	36.7	29.7	7.04	5.221	
2,800.0	2,800.0	2,795.5	2,795.0	4.7	4.5	-93.10	-2.4	-44.8	45.0	37.9	7.11	6.332	
2,900.0	2,900.0	2,895.0	2,894.1	4.8	4.5	-93.98	-3.7	-53.7	54.0	46.8	7.19	7.511	
3,000.0	3,000.0	2,994.6	2,993.3	4.9	4.6	-94.60	-5.0	-62.6	63.0	55.8	7.28	8.659	
3,100.0	3,100.0	3,094.2	3,092.5	5.0	4.6	-95.08	-6.3	-71.5	72.1	64.7	7.37	9.777	
3,200.0	3,200.0	3,193.8	3,191.7	5.1	4.6	-95.44	-7.7	-80.4	81.1	73.6	7.46	10.862	
3,300.0	3,300.0	3,293.4	3,290.9	5.2	4.7	-95.74	-9.0	-89.3	90.1	82.5	7.56	11.914	
3,400.0	3,400.0	3,393.0	3,390.1	5.3	4.7	-95.98	-10.3	-98.2	99.1	91.4	7.66	12.933	
3,500.0	3,500.0	3,492.6	3,489.2	5.4	4.8	-96.18	-11.6	-107.1	108.1	100.4	7.77	13.918	
3,600.0	3,600.0	3,592.2	3,588.4	5.5	4.8	-96.34	-12.9	-116.0	117.2	109.3	7.88	14.870	
3,700.0	3,700.0	3,691.8	3,687.6	5.7	4.9	-96.49	-14.2	-124.9	126.2	118.2	7.99	15.788	
3,800.0	3,800.0	3,791.4	3,786.8	5.8	4.9	-96.61	-15.5	-133.8	135.2	127.1	8.11	16.674	
3,900.0	3,900.0	3,891.0	3,886.0	5.9	5.0	-96.72	-16.8	-142.7	144.2	136.0	8.23	17.527	
4,000.0	4,000.0	3,990.6	3,985.2	6.0	5.1	-96.82	-18.1	-151.5	153.3	144.9	8.35	18.348	
4,100.0	4,100.0	4,090.1	4,084.4	6.1	5.1	-96.91	-19.4	-160.4	162.3	153.8	8.48	19.139	
4,200.0	4,200.0	4,189.7	4,183.5	6.2	5.2	-96.98	-20.7	-169.3	171.3	162.7	8.61	19.899	
4,300.0	4,300.0	4,289.3	4,282.7	6.3	5.3	-97.05	-22.1	-178.2	180.3	171.6	8.74	20.630	
4,400.0	4,400.0	4,388.9	4,381.9	6.5	5.4	-97.12	-23.4	-187.1	189.4	180.5	8.88	21.333	
4,500.0	4,500.0	4,488.5	4,481.1	6.6	5.4	-97.17	-24.7	-196.0	198.4	189.4	9.01	22.008	
4,600.0	4,600.0	4,588.1	4,580.3	6.7	5.5	-97.23	-26.0	-204.9	207.4	198.3	9.15	22.656	
4,700.0	4,700.0	4,687.7	4,679.5	6.8	5.6	-97.27	-27.3	-213.8	216.4	207.1	9.30	23.279	
4,800.0	4,800.0	4,787.3	4,778.6	6.9	5.7	-97.32	-28.6	-222.7	225.5	216.0	9.44	23.878	
4,900.0	4,900.0	4,886.9	4,877.8	7.0	5.8	-97.36	-29.9	-231.6	234.5	224.9	9.59	24.453	
5,000.0	5,000.0	4,986.5	4,977.0	7.2	5.8	-97.40	-31.2	-240.5	243.5	233.8	9.74	25.005	

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

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Reference Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	CABO WABO FED COM #705H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design CABO WABO FEDERAL PROJECT (ATLAS 2529) - CABO WABO FED COM #706H - OWB - PWP1												Offset Site Error:	3.0 usft
Survey Program: 0-Standard Keeper 104, 10164-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	5,100.0	5,086.1	5,076.2	7.3	5.9	-97.43	-32.5	-249.4	252.5	242.7	9.89	25.536	
5,200.0	5,200.0	5,185.6	5,175.4	7.4	6.0	-97.46	-33.8	-258.3	261.6	251.5	10.04	26.045	
5,300.0	5,300.0	5,285.2	5,274.6	7.5	6.1	-97.49	-35.1	-267.2	270.6	260.4	10.20	26.535	
5,400.0	5,400.0	5,384.8	5,373.8	7.6	6.2	-97.52	-36.5	-276.1	279.6	269.3	10.35	27.006	
5,500.0	5,500.0	5,484.4	5,472.9	7.8	6.3	-97.55	-37.8	-285.0	288.7	278.1	10.51	27.458	
5,600.0	5,600.0	5,584.2	5,572.3	7.8	6.4	1.82	-39.1	-293.9	296.0	285.3	10.66	27.756	
5,700.0	5,699.8	5,684.1	5,671.8	7.9	6.5	1.83	-40.4	-302.8	299.8	289.0	10.81	27.741	
5,722.3	5,722.1	5,706.4	5,694.0	7.9	6.5	1.83	-40.7	-304.8	300.1	289.3	10.84	27.692	
5,800.0	5,799.5	5,784.1	5,771.4	7.9	6.6	1.85	-41.7	-311.8	301.1	290.2	10.95	27.494	
5,900.0	5,899.2	5,884.1	5,870.9	7.9	6.7	1.87	-43.0	-320.7	302.4	291.3	11.10	27.236	
6,000.0	5,998.9	5,984.0	5,970.5	7.9	6.8	1.89	-44.3	-329.6	303.7	292.4	11.26	26.976	
6,100.0	6,098.6	6,084.0	6,070.1	8.0	6.9	1.92	-45.6	-338.6	305.0	293.6	11.42	26.714	
6,200.0	6,198.3	6,184.0	6,169.7	8.0	7.0	1.94	-47.0	-347.5	306.3	294.7	11.58	26.451	
6,300.0	6,298.0	6,284.0	6,269.3	8.0	7.1	1.96	-48.3	-356.4	307.6	295.8	11.74	26.188	
6,400.0	6,397.7	6,384.0	6,368.9	8.1	7.2	1.98	-49.6	-365.4	308.8	296.9	11.91	25.925	
6,500.0	6,497.4	6,484.0	6,468.4	8.1	7.3	2.00	-50.9	-374.3	310.1	298.0	12.08	25.662	
6,600.0	6,597.1	6,584.0	6,568.0	8.2	7.4	2.02	-52.2	-383.2	311.4	299.1	12.26	25.400	
6,700.0	6,696.8	6,684.0	6,667.6	8.2	7.5	2.04	-53.5	-392.1	312.7	300.3	12.44	25.140	
6,800.0	6,796.5	6,784.0	6,767.2	8.2	7.6	2.07	-54.8	-401.1	314.0	301.4	12.62	24.882	
6,900.0	6,896.2	6,884.0	6,866.8	8.3	7.7	2.09	-56.2	-410.0	315.3	302.5	12.80	24.625	
7,000.0	6,995.9	6,984.0	6,966.4	8.3	7.8	2.11	-57.5	-418.9	316.5	303.6	12.99	24.371	
7,100.0	7,095.6	7,084.0	7,065.9	8.4	7.9	2.13	-58.8	-427.9	317.8	304.7	13.18	24.120	
7,200.0	7,195.3	7,183.9	7,165.5	8.5	8.1	2.15	-60.1	-436.8	319.1	305.7	13.37	23.871	
7,300.0	7,295.0	7,283.9	7,265.1	8.5	8.2	2.17	-61.4	-445.7	320.4	306.8	13.56	23.625	
7,400.0	7,394.7	7,383.9	7,364.7	8.6	8.3	2.19	-62.7	-454.7	321.7	307.9	13.76	23.383	
7,500.0	7,494.4	7,483.9	7,464.3	8.6	8.4	2.21	-64.0	-463.6	323.0	309.0	13.96	23.143	
7,600.0	7,594.1	7,583.9	7,563.9	8.7	8.5	2.23	-65.4	-472.5	324.3	310.1	14.16	22.907	
7,700.0	7,693.8	7,683.9	7,663.4	8.7	8.6	2.25	-66.7	-481.5	325.5	311.2	14.36	22.675	
7,800.0	7,793.5	7,783.9	7,763.0	8.8	8.7	2.27	-68.0	-490.4	326.8	312.3	14.56	22.446	
7,900.0	7,893.2	7,883.9	7,862.6	8.9	8.8	2.29	-69.3	-499.3	328.1	313.3	14.77	22.220	
8,000.0	7,992.9	7,983.9	7,962.2	8.9	9.0	2.30	-70.6	-508.3	329.4	314.4	14.97	21.998	
8,100.0	8,092.6	8,083.9	8,061.8	9.0	9.1	2.32	-71.9	-517.2	330.7	315.5	15.18	21.780	
8,200.0	8,192.3	8,183.9	8,161.4	9.1	9.2	2.34	-73.2	-526.1	332.0	316.6	15.39	21.566	
8,300.0	8,292.0	8,283.9	8,260.9	9.2	9.3	2.36	-74.6	-535.1	333.3	317.7	15.61	21.355	
8,400.0	8,391.7	8,383.8	8,360.5	9.2	9.4	2.38	-75.9	-544.0	334.5	318.7	15.82	21.148	
8,500.0	8,491.4	8,483.8	8,460.1	9.3	9.5	2.40	-77.2	-552.9	335.8	319.8	16.03	20.945	
8,600.0	8,591.1	8,583.8	8,559.7	9.4	9.7	2.42	-78.5	-561.9	337.1	320.9	16.25	20.745	
8,700.0	8,690.8	8,683.8	8,659.3	9.5	9.8	2.43	-79.8	-570.8	338.4	321.9	16.47	20.549	
8,800.0	8,790.5	8,783.8	8,758.9	9.5	9.9	2.45	-81.1	-579.7	339.7	323.0	16.69	20.356	
8,900.0	8,890.2	8,883.8	8,858.4	9.6	10.0	2.47	-82.4	-588.7	341.0	324.1	16.91	20.168	
9,000.0	8,989.9	8,983.8	8,958.0	9.7	10.1	2.49	-83.7	-597.6	342.3	325.1	17.13	19.982	
9,100.0	9,089.6	9,083.8	9,057.6	9.8	10.3	2.50	-85.1	-606.5	343.5	326.2	17.35	19.800	
9,200.0	9,189.3	9,183.8	9,157.2	9.9	10.4	2.52	-86.4	-615.4	344.8	327.3	17.57	19.622	
9,300.0	9,289.0	9,283.8	9,256.8	10.0	10.5	2.54	-87.7	-624.4	346.1	328.3	17.80	19.447	
9,400.0	9,388.7	9,383.8	9,356.4	10.0	10.6	2.56	-89.0	-633.3	347.4	329.4	18.02	19.275	
9,500.0	9,488.4	9,483.8	9,455.9	10.1	10.7	2.57	-90.3	-642.2	348.7	330.4	18.25	19.106	
9,600.0	9,588.1	9,583.7	9,555.5	10.2	10.9	2.59	-91.6	-651.2	350.0	331.5	18.48	18.941	
9,700.0	9,687.8	9,683.7	9,655.1	10.3	11.0	2.61	-92.9	-660.1	351.3	332.6	18.71	18.779	
9,800.0	9,787.5	9,783.7	9,754.7	10.4	11.1	2.62	-94.3	-669.0	352.5	333.6	18.93	18.619	
9,900.0	9,887.2	9,883.7	9,854.3	10.5	11.2	2.64	-95.6	-678.0	353.8	334.7	19.16	18.463	
10,000.0	9,986.9	9,983.7	9,953.9	10.6	11.4	2.66	-96.9	-686.9	355.1	335.7	19.39	18.310	

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

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Reference Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	CABO WABO FED COM #705H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design CABO WABO FEDERAL PROJECT (ATLAS 2529) - CABO WABO FED COM #706H - OWB - PWP1													Offset Site Error:	3.0 usft
Survey Program: 0-Standard Keeper 104, 10164-MWD+IFR1+FDIR													Offset Well Error:	3.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,100.0	10,086.6	10,083.7	10,053.4	10.7	11.5	2.67		-98.2	-695.8	356.4	336.8	19.56	18.224	
10,152.2	10,138.7	10,135.9	10,105.4	10.7	11.5	2.68		-98.9	-700.5	357.1	337.5	19.61	18.212	
10,200.0	10,186.2	10,179.0	10,148.3	10.7	11.6	45.05		-99.6	-704.4	357.6	337.9	19.66	18.186	
10,250.0	10,235.6	10,216.7	10,185.7	10.7	11.6	61.30		-102.1	-708.7	359.1	339.3	19.80	18.138	
10,300.0	10,284.1	10,250.0	10,218.4	10.7	11.6	68.42		-106.1	-713.3	361.9	341.8	20.09	18.017	
10,350.0	10,331.5	10,292.1	10,259.2	10.7	11.6	72.59		-113.7	-720.3	365.9	345.6	20.32	18.012	
10,400.0	10,377.4	10,329.7	10,295.0	10.7	11.6	75.27		-122.8	-727.5	371.4	350.7	20.66	17.973	
10,450.0	10,421.4	10,367.3	10,329.9	10.8	11.6	77.21		-134.1	-735.6	378.1	357.1	21.03	17.977	
10,500.0	10,463.3	10,400.0	10,359.5	10.8	11.6	78.53		-145.5	-743.4	386.2	364.7	21.54	17.935	
10,550.0	10,502.5	10,442.2	10,396.6	10.9	11.6	79.87		-162.6	-754.5	395.6	373.9	21.76	18.182	
10,600.0	10,539.0	10,479.6	10,428.0	10.9	11.7	80.81		-179.8	-765.1	406.4	384.3	22.08	18.402	
10,650.0	10,572.4	10,517.0	10,458.1	11.0	11.7	81.56		-198.9	-776.5	418.4	396.1	22.37	18.707	
10,700.0	10,602.4	10,550.0	10,483.4	11.1	11.7	81.95		-217.2	-787.1	431.8	409.1	22.71	19.014	
10,750.0	10,628.8	10,591.8	10,513.6	11.2	11.8	82.56		-242.3	-801.3	446.3	423.5	22.81	19.566	
10,800.0	10,651.5	10,629.2	10,538.9	11.2	11.8	82.84		-266.5	-814.7	461.9	439.0	22.98	20.105	
10,850.0	10,670.1	10,666.9	10,562.4	11.3	11.9	82.99		-292.3	-828.6	478.7	455.6	23.12	20.705	
10,900.0	10,684.7	10,704.7	10,584.0	11.4	12.0	83.01		-319.7	-843.2	496.4	473.2	23.25	21.350	
10,950.0	10,695.1	10,742.9	10,603.8	11.5	12.0	82.91		-348.7	-858.3	515.1	491.7	23.39	22.021	
11,000.0	10,701.2	10,781.5	10,621.5	11.6	12.1	82.71		-379.2	-874.0	534.5	511.0	23.55	22.700	
11,044.7	10,703.0	10,816.5	10,635.5	11.7	12.2	82.45		-407.8	-888.5	552.5	528.8	23.71	23.300	
11,100.0	10,703.1	10,861.7	10,650.7	11.9	12.3	84.38		-445.8	-907.4	575.5	551.5	23.98	24.002	
11,200.0	10,703.2	10,949.7	10,670.5	12.2	12.6	86.78		-522.8	-944.9	618.3	593.7	24.61	25.123	
11,300.0	10,703.3	11,044.8	10,677.0	12.5	12.9	87.61		-608.6	-985.3	661.2	635.8	25.36	26.071	
11,400.0	10,703.4	11,164.7	10,677.1	13.0	13.4	87.79		-718.5	-1,033.3	701.7	675.4	26.29	26.695	
11,500.0	10,703.5	11,289.0	10,677.3	13.5	13.9	87.94		-834.4	-1,078.1	738.3	711.0	27.33	27.016	
11,600.0	10,703.6	11,417.4	10,677.4	14.0	14.6	88.05		-956.1	-1,119.0	770.8	742.3	28.48	27.067	
11,700.0	10,703.7	11,549.5	10,677.5	14.6	15.3	88.15		-1,083.1	-1,155.4	798.9	769.2	29.73	26.875	
11,800.0	10,703.8	11,685.0	10,677.7	15.2	16.0	88.22		-1,214.9	-1,186.6	822.6	791.5	31.04	26.497	
11,900.0	10,703.9	11,823.4	10,677.8	15.9	16.8	88.28		-1,350.9	-1,212.0	841.6	809.1	32.42	25.961	
12,000.0	10,704.0	11,964.0	10,678.0	16.5	17.7	88.32		-1,490.3	-1,231.1	855.7	821.9	33.82	25.302	
12,100.0	10,704.1	12,106.3	10,678.1	17.2	18.5	88.35		-1,632.0	-1,243.4	865.0	829.8	35.24	24.547	
12,200.0	10,704.2	12,249.6	10,678.3	18.0	19.4	88.36		-1,775.2	-1,248.6	869.3	832.6	36.65	23.717	
12,300.0	10,704.3	12,365.2	10,678.4	18.7	20.2	88.36		-1,890.8	-1,248.4	869.6	831.6	38.05	22.852	
12,400.0	10,704.4	12,465.2	10,678.5	19.4	20.8	88.36		-1,990.8	-1,247.7	869.6	830.1	39.48	22.028	
12,500.0	10,704.5	12,565.2	10,678.6	20.2	21.5	88.36		-2,090.8	-1,247.1	869.6	828.7	40.92	21.249	
12,600.0	10,704.6	12,665.2	10,678.7	20.9	22.1	88.36		-2,190.8	-1,246.5	869.6	827.2	42.39	20.514	
12,700.0	10,704.7	12,765.2	10,678.8	21.7	22.8	88.36		-2,290.8	-1,245.8	869.6	825.7	43.88	19.820	
12,800.0	10,704.8	12,865.2	10,678.9	22.5	23.5	88.36		-2,390.8	-1,245.2	869.6	824.2	45.38	19.164	
12,900.0	10,704.9	12,965.2	10,679.0	23.3	24.2	88.36		-2,490.8	-1,244.6	869.6	822.7	46.90	18.544	
13,000.0	10,705.0	13,065.2	10,679.1	24.0	24.9	88.36		-2,590.8	-1,244.0	869.6	821.2	48.43	17.957	
13,100.0	10,705.1	13,165.2	10,679.2	24.8	25.7	88.36		-2,690.8	-1,243.3	869.6	819.7	49.97	17.403	
13,200.0	10,705.2	13,265.2	10,679.3	25.6	26.4	88.36		-2,790.8	-1,242.7	869.6	818.1	51.53	16.878	
13,300.0	10,705.4	13,365.2	10,679.4	26.4	27.1	88.36		-2,890.8	-1,242.1	869.6	816.5	53.09	16.380	
13,400.0	10,705.5	13,465.2	10,679.5	27.2	27.9	88.36		-2,990.8	-1,241.5	869.6	815.0	54.67	15.908	
13,500.0	10,705.6	13,565.2	10,679.6	28.1	28.7	88.36		-3,090.8	-1,240.8	869.6	813.4	56.25	15.460	
13,600.0	10,705.7	13,665.2	10,679.7	28.9	29.4	88.36		-3,190.8	-1,240.2	869.6	811.8	57.84	15.035	
13,700.0	10,705.8	13,765.2	10,679.8	29.7	30.2	88.36		-3,290.8	-1,239.6	869.6	810.2	59.44	14.630	
13,800.0	10,705.9	13,865.2	10,680.0	30.5	31.0	88.36		-3,390.8	-1,238.9	869.6	808.6	61.05	14.246	
13,900.0	10,706.0	13,965.2	10,680.1	31.3	31.7	88.36		-3,490.8	-1,238.3	869.6	807.0	62.66	13.879	
14,000.0	10,706.1	14,065.2	10,680.2	32.1	32.5	88.36		-3,590.8	-1,237.7	869.6	805.4	64.27	13.530	
14,100.0	10,706.2	14,165.2	10,680.3	33.0	33.3	88.36		-3,690.8	-1,237.1	869.6	803.7	65.90	13.197	

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

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Reference Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	CABO WABO FED COM #705H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design CABO WABO FEDERAL PROJECT (ATLAS 2529) - CABO WABO FED COM #706H - OWB - PWP1													Offset Site Error:	3.0 usft
Survey Program: 0-Standard Keeper 104, 10164-MWD+IFR1+FDIR													Offset Well Error:	3.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,200.0	10,706.3	14,265.2	10,680.4	33.8	34.1	88.36	88.36	-3,790.8	-1,236.4	869.6	802.1	67.53	12.878	
14,300.0	10,706.4	14,365.2	10,680.5	34.6	34.9	88.36	88.36	-3,890.8	-1,235.8	869.6	800.5	69.16	12.574	
14,400.0	10,706.5	14,465.2	10,680.6	35.5	35.7	88.36	88.36	-3,990.8	-1,235.2	869.6	798.8	70.80	12.284	
14,500.0	10,706.6	14,565.2	10,680.7	36.3	36.5	88.36	88.36	-4,090.8	-1,234.5	869.6	797.2	72.44	12.005	
14,600.0	10,706.7	14,665.2	10,680.8	37.1	37.3	88.36	88.36	-4,190.8	-1,233.9	869.6	795.6	74.08	11.739	
14,700.0	10,706.8	14,765.2	10,680.9	38.0	38.1	88.36	88.36	-4,290.7	-1,233.3	869.6	793.9	75.73	11.483	
14,800.0	10,706.9	14,865.2	10,681.0	38.8	38.9	88.36	88.36	-4,390.7	-1,232.7	869.6	792.3	77.38	11.238	
14,900.0	10,707.0	14,965.2	10,681.1	39.6	39.7	88.36	88.36	-4,490.7	-1,232.0	869.6	790.6	79.04	11.003	
15,000.0	10,707.1	15,065.2	10,681.2	40.5	40.5	88.36	88.36	-4,590.7	-1,231.4	869.6	788.9	80.69	10.777	
15,100.0	10,707.2	15,165.2	10,681.3	41.3	41.3	88.36	88.36	-4,690.7	-1,230.8	869.6	787.3	82.35	10.560	
15,200.0	10,707.3	15,265.2	10,681.4	42.1	42.1	88.36	88.36	-4,790.7	-1,230.2	869.6	785.6	84.02	10.351	
15,300.0	10,707.4	15,365.2	10,681.5	43.0	43.0	88.36	88.36	-4,890.7	-1,229.5	869.6	784.0	85.68	10.150	
15,400.0	10,707.5	15,465.2	10,681.6	43.8	43.8	88.36	88.36	-4,990.7	-1,228.9	869.6	782.3	87.35	9.956	
15,500.0	10,707.6	15,565.2	10,681.7	44.7	44.6	88.36	88.36	-5,090.7	-1,228.3	869.6	780.6	89.02	9.769	
15,600.0	10,707.8	15,665.2	10,681.8	45.5	45.4	88.36	88.36	-5,190.7	-1,227.6	869.6	778.9	90.69	9.589	
15,700.0	10,707.9	15,765.2	10,681.9	46.4	46.2	88.36	88.36	-5,290.7	-1,227.0	869.6	777.3	92.37	9.415	
15,800.0	10,708.0	15,865.2	10,682.0	47.2	47.1	88.36	88.36	-5,390.7	-1,226.4	869.6	775.6	94.04	9.247	
15,900.0	10,708.1	15,965.2	10,682.1	48.1	47.9	88.36	88.36	-5,490.7	-1,225.8	869.6	773.9	95.72	9.085	
16,000.0	10,708.2	16,065.2	10,682.2	48.9	48.7	88.36	88.36	-5,590.7	-1,225.1	869.6	772.2	97.40	8.929	
16,100.0	10,708.3	16,165.2	10,682.3	49.7	49.5	88.36	88.36	-5,690.7	-1,224.5	869.6	770.6	99.08	8.777	
16,200.0	10,708.4	16,265.2	10,682.4	50.6	50.4	88.36	88.36	-5,790.7	-1,223.9	869.6	768.9	100.76	8.631	
16,300.0	10,708.5	16,365.2	10,682.5	51.4	51.2	88.36	88.36	-5,890.7	-1,223.3	869.6	767.2	102.44	8.489	
16,400.0	10,708.6	16,465.2	10,682.6	52.3	52.0	88.36	88.36	-5,990.7	-1,222.6	869.6	765.5	104.13	8.352	
16,500.0	10,708.7	16,565.2	10,682.7	53.1	52.9	88.36	88.36	-6,090.7	-1,222.0	869.6	763.8	105.81	8.219	
16,600.0	10,708.8	16,665.2	10,682.8	54.0	53.7	88.36	88.36	-6,190.7	-1,221.4	869.6	762.1	107.50	8.090	
16,700.0	10,708.9	16,765.2	10,682.9	54.8	54.5	88.36	88.36	-6,290.7	-1,220.7	869.6	760.5	109.19	7.965	
16,800.0	10,709.0	16,865.2	10,683.0	55.7	55.4	88.36	88.36	-6,390.7	-1,220.1	869.7	758.8	110.88	7.843	
16,900.0	10,709.1	16,965.2	10,683.2	56.5	56.2	88.36	88.36	-6,490.7	-1,219.5	869.7	757.1	112.57	7.726	
17,000.0	10,709.2	17,065.2	10,683.3	57.4	57.1	88.36	88.36	-6,590.7	-1,218.9	869.7	755.4	114.26	7.611	
17,100.0	10,709.3	17,165.2	10,683.4	58.2	57.9	88.36	88.36	-6,690.7	-1,218.2	869.7	753.7	115.95	7.500	
17,200.0	10,709.4	17,265.2	10,683.5	59.1	58.7	88.36	88.36	-6,790.7	-1,217.6	869.7	752.0	117.65	7.392	
17,300.0	10,709.5	17,365.2	10,683.6	59.9	59.6	88.36	88.36	-6,890.7	-1,217.0	869.7	750.3	119.34	7.287	
17,400.0	10,709.6	17,465.2	10,683.7	60.8	60.4	88.36	88.36	-6,990.7	-1,216.3	869.7	748.6	121.03	7.185	
17,500.0	10,709.7	17,565.2	10,683.8	61.6	61.3	88.36	88.36	-7,090.7	-1,215.7	869.7	746.9	122.73	7.086	
17,600.0	10,709.8	17,665.2	10,683.9	62.5	62.1	88.35	88.35	-7,190.7	-1,215.1	869.7	745.2	124.43	6.989	
17,700.0	10,709.9	17,765.2	10,684.0	63.4	62.9	88.35	88.35	-7,290.7	-1,214.5	869.7	743.5	126.12	6.895	
17,800.0	10,710.0	17,865.2	10,684.1	64.2	63.8	88.35	88.35	-7,390.7	-1,213.8	869.7	741.8	127.82	6.804	
17,900.0	10,710.2	17,965.2	10,684.2	65.1	64.6	88.35	88.35	-7,490.7	-1,213.2	869.7	740.1	129.52	6.714	
18,000.0	10,710.3	18,065.2	10,684.3	65.9	65.5	88.35	88.35	-7,590.7	-1,212.6	869.7	738.4	131.22	6.627	
18,100.0	10,710.4	18,165.2	10,684.4	66.8	66.3	88.35	88.35	-7,690.7	-1,212.0	869.7	736.7	132.92	6.543	
18,200.0	10,710.5	18,265.2	10,684.5	67.6	67.1	88.35	88.35	-7,790.7	-1,211.3	869.7	735.0	134.62	6.460	
18,300.0	10,710.6	18,365.2	10,684.6	68.5	68.0	88.35	88.35	-7,890.7	-1,210.7	869.7	733.3	136.32	6.379	
18,400.0	10,710.7	18,465.2	10,684.7	69.3	68.8	88.35	88.35	-7,990.7	-1,210.1	869.7	731.6	138.02	6.301	
18,500.0	10,710.8	18,565.2	10,684.8	70.2	69.7	88.35	88.35	-8,090.7	-1,209.4	869.7	729.9	139.73	6.224	
18,600.0	10,710.9	18,665.2	10,684.9	71.0	70.5	88.35	88.35	-8,190.7	-1,208.8	869.7	728.2	141.43	6.149	
18,700.0	10,711.0	18,765.2	10,685.0	71.9	71.4	88.35	88.35	-8,290.7	-1,208.2	869.7	726.5	143.13	6.076	
18,800.0	10,711.1	18,865.2	10,685.1	72.7	72.2	88.35	88.35	-8,390.7	-1,207.6	869.7	724.8	144.84	6.004	
18,900.0	10,711.2	18,965.2	10,685.2	73.6	73.1	88.35	88.35	-8,490.7	-1,206.9	869.7	723.1	146.54	5.935	
19,000.0	10,711.3	19,065.2	10,685.3	74.5	73.9	88.35	88.35	-8,590.7	-1,206.3	869.7	721.4	148.25	5.866	
19,100.0	10,711.4	19,165.2	10,685.4	75.3	74.8	88.35	88.35	-8,690.7	-1,205.7	869.7	719.7	149.95	5.800	
19,200.0	10,711.5	19,265.2	10,685.5	76.2	75.6	88.35	88.35	-8,790.7	-1,205.1	869.7	718.0	151.66	5.734	

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

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Reference Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	CABO WABO FED COM #705H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design CABO WABO FEDERAL PROJECT (ATLAS 2529) - CABO WABO FED COM #706H - OWB - PWP1													Offset Site Error:	3.0 usft
Survey Program: 0-Standard Keeper 104, 10164-MWD+IFR1+FDIR													Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
19,300.0	10,711.6	19,365.2	10,685.6	77.0	76.5	88.35	-8,890.7	-1,204.4	869.7	716.3	153.36	5.671		
19,400.0	10,711.7	19,465.2	10,685.7	77.9	77.3	88.35	-8,990.7	-1,203.8	869.7	714.6	155.07	5.608		
19,500.0	10,711.8	19,565.2	10,685.8	78.7	78.2	88.35	-9,090.7	-1,203.2	869.7	712.9	156.78	5.547		
19,600.0	10,711.9	19,665.2	10,685.9	79.6	79.0	88.35	-9,190.7	-1,202.5	869.7	711.2	158.48	5.487		
19,700.0	10,712.0	19,765.2	10,686.0	80.5	79.9	88.35	-9,290.6	-1,201.9	869.7	709.5	160.19	5.429		
19,800.0	10,712.1	19,865.2	10,686.1	81.3	80.7	88.35	-9,390.6	-1,201.3	869.7	707.8	161.90	5.372		
19,900.0	10,712.2	19,965.2	10,686.2	82.2	81.6	88.35	-9,490.6	-1,200.7	869.7	706.1	163.61	5.316		
20,000.0	10,712.3	20,065.2	10,686.4	83.0	82.4	88.35	-9,590.6	-1,200.0	869.7	704.4	165.32	5.261		
20,100.0	10,712.4	20,165.2	10,686.5	83.9	83.3	88.35	-9,690.6	-1,199.4	869.7	702.7	167.02	5.207		
20,200.0	10,712.6	20,265.2	10,686.6	84.7	84.1	88.35	-9,790.6	-1,198.8	869.7	700.9	168.73	5.154		
20,300.0	10,712.7	20,365.2	10,686.7	85.6	85.0	88.35	-9,890.6	-1,198.2	869.7	699.2	170.44	5.102		
20,400.0	10,712.8	20,465.2	10,686.8	86.5	85.8	88.35	-9,990.6	-1,197.5	869.7	697.5	172.15	5.052		
20,500.0	10,712.9	20,565.2	10,686.9	87.3	86.7	88.35	-10,090.6	-1,196.9	869.7	695.8	173.86	5.002		
20,600.0	10,713.0	20,665.2	10,687.0	88.2	87.5	88.35	-10,190.6	-1,196.3	869.7	694.1	175.57	4.953		
20,628.6	10,713.0	20,693.8	10,687.0	88.3	87.8	88.35	-10,219.3	-1,196.1	869.7	693.7	175.99	4.942		

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Reference Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	CABO WABO FED COM #705H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design CABO WABO FEDERAL PROJECT (ATLAS 2529) - CABO WABO FED COM #804H - OWB - PWP0												Offset Site Error: 3.0 usft	
Survey Program: 0-MWD+IFR1+FDIR												Offset Well Error: 3.0 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)			
0.0	0.0	0.0	0.0	3.0	3.0	-90.51	-2.5	-280.0	280.0				
100.0	100.0	96.0	96.0	3.0	3.0	-90.51	-2.5	-280.0	280.0	274.0	6.00	46.647	
200.0	200.0	196.0	196.0	3.0	3.0	-90.51	-2.5	-280.0	280.0	274.0	6.04	46.373	
300.0	300.0	296.0	296.0	3.0	3.1	-90.51	-2.5	-280.0	280.0	273.9	6.12	45.776	
400.0	400.0	396.0	396.0	3.0	3.2	-90.51	-2.5	-280.0	280.0	273.8	6.24	44.906	
500.0	500.0	496.0	496.0	3.1	3.4	-90.51	-2.5	-280.0	280.0	273.6	6.39	43.819	
600.0	600.0	596.0	596.0	3.1	3.6	-90.51	-2.5	-280.0	280.0	273.4	6.58	42.578	
700.0	700.0	696.0	696.0	3.1	3.8	-90.51	-2.5	-280.0	280.0	273.2	6.79	41.238	
800.0	800.0	796.0	796.0	3.2	4.0	-90.51	-2.5	-280.0	280.0	273.0	7.03	39.846	
900.0	900.0	896.0	896.0	3.2	4.2	-90.51	-2.5	-280.0	280.0	272.7	7.28	38.440	
1,000.0	1,000.0	996.0	996.0	3.2	4.5	-90.51	-2.5	-280.0	280.0	272.4	7.56	37.047	
1,100.0	1,100.0	1,096.0	1,096.0	3.3	4.8	-90.51	-2.5	-280.0	280.0	272.2	7.85	35.686	
1,200.0	1,200.0	1,196.0	1,196.0	3.4	5.0	-90.51	-2.5	-280.0	280.0	271.9	8.15	34.370	
1,300.0	1,300.0	1,296.0	1,296.0	3.4	5.3	-90.51	-2.5	-280.0	280.0	271.5	8.46	33.106	
1,400.0	1,400.0	1,396.0	1,396.0	3.5	5.6	-90.51	-2.5	-280.0	280.0	271.2	8.78	31.899	
1,500.0	1,500.0	1,496.0	1,496.0	3.5	5.9	-90.51	-2.5	-280.0	280.0	270.9	9.11	30.750	
1,600.0	1,600.0	1,596.0	1,596.0	3.6	6.3	-90.51	-2.5	-280.0	280.0	270.6	9.44	29.659	
1,700.0	1,700.0	1,696.0	1,696.0	3.7	6.6	-90.51	-2.5	-280.0	280.0	270.2	9.78	28.625	
1,800.0	1,800.0	1,796.0	1,796.0	3.8	6.9	-90.51	-2.5	-280.0	280.0	269.9	10.13	27.646	
1,900.0	1,900.0	1,896.0	1,896.0	3.9	7.2	-90.51	-2.5	-280.0	280.0	269.5	10.48	26.720	
2,000.0	2,000.0	1,996.0	1,996.0	3.9	7.5	-90.51	-2.5	-280.0	280.0	269.2	10.83	25.843	
2,100.0	2,100.0	2,096.0	2,096.0	4.0	7.9	-90.51	-2.5	-280.0	280.0	268.8	11.19	25.013	
2,200.0	2,200.0	2,196.0	2,196.0	4.1	8.2	-90.51	-2.5	-280.0	280.0	268.4	11.56	24.227	
2,300.0	2,300.0	2,296.0	2,296.0	4.2	8.5	-90.51	-2.5	-280.0	280.0	268.1	11.92	23.483	
2,400.0	2,400.0	2,396.0	2,396.0	4.3	8.9	-90.51	-2.5	-280.0	280.0	267.7	12.29	22.777	
2,500.0	2,500.0	2,496.0	2,496.0	4.4	9.2	-90.51	-2.5	-280.0	280.0	267.3	12.67	22.108	
2,600.0	2,600.0	2,606.1	2,606.1	4.5	9.6	-90.42	-2.0	-278.1	278.3	265.2	13.06	21.306	
2,700.0	2,700.0	2,716.3	2,716.1	4.6	9.9	-90.14	-0.7	-272.0	272.8	259.3	13.44	20.297	
2,800.0	2,800.0	2,819.8	2,819.2	4.7	10.3	-89.70	1.4	-263.2	264.3	250.5	13.81	19.138	
2,900.0	2,900.0	2,919.4	2,918.4	4.8	10.6	-89.24	3.4	-254.5	255.5	241.3	14.18	18.019	
3,000.0	3,000.0	3,019.0	3,017.6	4.9	11.0	-88.74	5.4	-245.7	246.7	232.2	14.55	16.955	
3,100.0	3,100.0	3,118.6	3,116.8	5.0	11.3	-88.20	7.4	-236.9	238.0	223.0	14.93	15.942	
3,200.0	3,200.0	3,218.2	3,216.0	5.1	11.6	-87.63	9.5	-228.2	229.2	213.9	15.31	14.977	
3,300.0	3,300.0	3,317.8	3,315.2	5.2	12.0	-87.01	11.5	-219.4	220.5	204.8	15.69	14.058	
3,400.0	3,400.0	3,417.4	3,414.3	5.3	12.3	-86.33	13.5	-210.6	211.9	195.8	16.07	13.182	
3,500.0	3,500.0	3,517.0	3,513.5	5.4	12.7	-85.61	15.5	-201.9	203.2	186.8	16.46	12.346	
3,600.0	3,600.0	3,616.6	3,612.7	5.5	13.0	-84.81	17.5	-193.1	194.6	177.8	16.85	11.548	
3,700.0	3,700.0	3,716.2	3,711.9	5.7	13.3	-83.94	19.6	-184.3	186.0	168.8	17.25	10.787	
3,800.0	3,800.0	3,815.8	3,811.1	5.8	13.7	-82.99	21.6	-175.6	177.5	159.9	17.65	10.061	
3,900.0	3,900.0	3,915.3	3,910.3	5.9	14.0	-81.95	23.6	-166.8	169.1	151.0	18.05	9.367	
4,000.0	4,000.0	4,014.9	4,009.4	6.0	14.4	-80.79	25.6	-158.0	160.7	142.2	18.46	8.704	
4,100.0	4,100.0	4,114.5	4,108.6	6.1	14.7	-79.51	27.6	-149.3	152.3	133.5	18.87	8.071	
4,200.0	4,200.0	4,214.1	4,207.8	6.2	15.1	-78.08	29.7	-140.5	144.1	124.8	19.30	7.467	
4,300.0	4,300.0	4,313.7	4,307.0	6.3	15.4	-76.48	31.7	-131.7	135.9	116.2	19.73	6.890	
4,400.0	4,400.0	4,413.3	4,406.2	6.5	15.8	-74.67	33.7	-123.0	127.9	107.7	20.17	6.341	
4,500.0	4,500.0	4,512.9	4,505.4	6.6	16.1	-72.63	35.7	-114.2	120.0	99.4	20.63	5.818	
4,600.0	4,600.0	4,612.5	4,604.6	6.7	16.5	-70.30	37.7	-105.4	112.3	91.2	21.10	5.321	
4,700.0	4,700.0	4,712.1	4,703.7	6.8	16.8	-67.64	39.8	-96.7	104.8	83.2	21.60	4.851	
4,800.0	4,800.0	4,811.7	4,802.9	6.9	17.2	-64.58	41.8	-87.9	97.6	75.4	22.13	4.408	
4,900.0	4,900.0	4,911.3	4,902.1	7.0	17.5	-61.03	43.8	-79.1	90.6	68.0	22.69	3.994	
5,000.0	5,000.0	5,010.8	5,001.3	7.2	17.9	-56.93	45.8	-70.4	84.1	60.8	23.30	3.611	

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

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Reference Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	CABO WABO FED COM #705H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design CABO WABO FEDERAL PROJECT (ATLAS 2529) - CABO WABO FED COM #804H - OWB - PWP0													Offset Site Error:	3.0 usft
Survey Program: 0-MWD+IFR1+FDIR													Offset Well Error:	3.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	5,100.0	5,110.4	5,100.5	7.3	18.2	-52.16		47.8	-61.6	78.1	54.2	23.95	3.262	
5,200.0	5,200.0	5,210.0	5,199.7	7.4	18.6	-46.65		49.9	-52.8	72.7	48.1	24.65	2.950	
5,300.0	5,300.0	5,309.6	5,298.8	7.5	18.9	-40.34		51.9	-44.1	68.1	42.7	25.40	2.682	
5,400.0	5,400.0	5,409.2	5,398.0	7.6	19.3	-33.21		53.9	-35.3	64.5	38.3	26.17	2.463	
5,500.0	5,500.0	5,508.8	5,497.2	7.8	19.6	-25.38		55.9	-26.5	61.9	35.0	26.94	2.298	
5,600.0	5,600.0	5,608.2	5,596.2	7.8	20.0	83.99		57.9	-17.8	60.4	32.7	27.67	2.183	
5,629.5	5,629.5	5,637.5	5,625.4	7.8	20.1	87.60		58.5	-15.2	60.3	32.4	27.85	2.164	CC, ES, SF
5,700.0	5,699.8	5,707.2	5,694.8	7.9	20.4	97.26		59.9	-9.1	61.1	32.9	28.21	2.167	
5,722.3	5,722.1	5,729.2	5,716.7	7.9	20.4	100.54		60.4	-7.1	61.8	33.5	28.29	2.185	
5,800.0	5,799.5	5,805.8	5,793.0	7.9	20.7	111.50		61.9	-0.4	65.9	37.5	28.44	2.317	
5,900.0	5,899.2	5,904.4	5,891.2	7.9	21.1	123.31		63.9	8.3	74.2	45.8	28.46	2.609	
6,000.0	5,998.9	6,003.0	5,989.4	7.9	21.4	132.48		65.9	17.0	85.1	56.6	28.43	2.992	
6,100.0	6,098.6	6,101.6	6,087.6	8.0	21.8	139.47		67.9	25.7	97.6	69.1	28.45	3.430	
6,200.0	6,198.3	6,200.2	6,185.7	8.0	22.1	144.83		69.9	34.3	111.2	82.7	28.54	3.896	
6,300.0	6,298.0	6,298.8	6,283.9	8.0	22.5	149.00		71.9	43.0	125.6	96.9	28.70	4.376	
6,400.0	6,397.7	6,397.4	6,382.1	8.1	22.8	152.31		73.9	51.7	140.5	111.6	28.91	4.859	
6,500.0	6,497.4	6,495.9	6,480.3	8.1	23.2	154.98		75.9	60.4	155.7	126.6	29.16	5.340	
6,600.0	6,597.1	6,594.5	6,578.5	8.2	23.5	157.17		77.9	69.1	171.3	141.8	29.45	5.815	
6,700.0	6,696.8	6,693.1	6,676.7	8.2	23.9	158.99		79.9	77.7	187.0	157.2	29.76	6.283	
6,800.0	6,796.5	6,791.7	6,774.9	8.2	24.2	160.53		81.9	86.4	202.9	172.8	30.10	6.741	
6,900.0	6,896.2	6,890.3	6,873.1	8.3	24.6	161.85		83.9	95.1	218.9	188.5	30.45	7.189	
7,000.0	6,995.9	6,988.9	6,971.3	8.3	24.9	162.98		85.9	103.8	235.0	204.2	30.82	7.626	
7,100.0	7,095.6	7,087.5	7,069.5	8.4	25.3	163.98		87.9	112.4	251.2	220.0	31.20	8.052	
7,200.0	7,195.3	7,186.1	7,167.6	8.5	25.7	164.85		89.9	121.1	267.5	235.9	31.59	8.468	
7,300.0	7,295.0	7,284.7	7,265.8	8.5	26.0	165.62		91.9	129.8	283.8	251.8	31.98	8.873	
7,400.0	7,394.7	7,383.3	7,364.0	8.6	26.4	166.31		93.9	138.5	300.2	267.8	32.39	9.267	
7,500.0	7,494.4	7,481.9	7,462.2	8.6	26.7	166.92		95.9	147.2	316.5	283.7	32.80	9.651	
7,600.0	7,594.1	7,580.5	7,560.4	8.7	27.1	167.48		97.9	155.8	333.0	299.8	33.21	10.025	
7,700.0	7,693.8	7,679.1	7,658.6	8.7	27.4	167.98		99.9	164.5	349.4	315.8	33.64	10.389	
7,800.0	7,793.5	7,777.7	7,756.8	8.8	27.8	168.44		101.9	173.2	365.9	331.8	34.06	10.743	
7,900.0	7,893.2	7,876.2	7,855.0	8.9	28.1	168.86		103.9	181.9	382.4	347.9	34.49	11.087	
8,000.0	7,992.9	7,974.8	7,953.2	8.9	28.5	169.24		105.9	190.6	398.9	364.0	34.92	11.423	
8,100.0	8,092.6	8,073.4	8,051.3	9.0	28.8	169.59		107.9	199.2	415.5	380.1	35.36	11.750	
8,200.0	8,192.3	8,172.0	8,149.5	9.1	29.2	169.92		109.9	207.9	432.0	396.2	35.80	12.068	
8,300.0	8,292.0	8,270.6	8,247.7	9.2	29.6	170.22		111.9	216.6	448.6	412.3	36.24	12.378	
8,400.0	8,391.7	8,369.2	8,345.9	9.2	29.9	170.50		114.0	225.3	465.1	428.5	36.68	12.679	
8,500.0	8,491.4	8,467.8	8,444.1	9.3	30.3	170.77		116.0	234.0	481.7	444.6	37.13	12.974	
8,600.0	8,591.1	8,566.4	8,542.3	9.4	30.6	171.01		118.0	242.6	498.3	460.7	37.58	13.260	
8,700.0	8,690.8	8,665.0	8,640.5	9.5	31.0	171.24		120.0	251.3	514.9	476.9	38.03	13.539	
8,800.0	8,790.5	8,763.6	8,738.7	9.5	31.3	171.45		122.0	260.0	531.5	493.0	38.48	13.811	
8,900.0	8,890.2	8,862.2	8,836.9	9.6	31.7	171.65		124.0	268.7	548.1	509.2	38.94	14.077	
9,000.0	8,989.9	8,960.8	8,935.1	9.7	32.0	171.84		126.0	277.3	564.8	525.4	39.40	14.335	
9,100.0	9,089.6	9,059.4	9,033.2	9.8	32.4	172.02		128.0	286.0	581.4	541.5	39.85	14.588	
9,200.0	9,189.3	9,157.9	9,131.4	9.9	32.8	172.19		130.0	294.7	598.0	557.7	40.31	14.834	
9,300.0	9,289.0	9,256.5	9,229.6	10.0	33.1	172.35		132.0	303.4	614.6	573.9	40.78	15.074	
9,400.0	9,388.7	9,355.1	9,327.8	10.0	33.5	172.50		134.0	312.1	631.3	590.1	41.24	15.308	
9,500.0	9,488.4	9,453.7	9,426.0	10.1	33.8	172.64		136.0	320.7	647.9	606.2	41.70	15.537	
9,600.0	9,588.1	9,552.3	9,524.2	10.2	34.2	172.78		138.0	329.4	664.6	622.4	42.17	15.761	
9,700.0	9,687.8	9,650.9	9,622.4	10.3	34.5	172.91		140.0	338.1	681.2	638.6	42.63	15.979	
9,800.0	9,787.5	9,749.5	9,720.6	10.4	34.9	173.03		142.0	346.8	697.9	654.8	43.10	16.192	
9,900.0	9,887.2	9,848.1	9,818.8	10.5	35.3	173.15		144.0	355.5	714.5	671.0	43.57	16.400	

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

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Reference Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	CABO WABO FED COM #705H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design CABO WABO FEDERAL PROJECT (ATLAS 2529) - CABO WABO FED COM #804H - OWB - PWP0													Offset Site Error:	3.0 usft
Survey Program: 0-MWD+IFR1+FDIR													Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,000.0	9,986.9	9,946.7	9,916.9	10.6	35.6	173.26	146.0	364.1	731.2	687.2	44.04	16.603		
10,100.0	10,086.6	10,045.3	10,015.1	10.7	36.0	173.37	148.0	372.8	747.9	703.2	44.69	16.736		
10,152.2	10,138.7	10,096.8	10,066.4	10.7	36.2	173.42	149.0	377.4	756.6	711.7	44.89	16.853		
10,200.0	10,186.2	10,143.8	10,113.2	10.7	36.3	-143.67	149.9	381.5	765.1	720.0	45.08	16.972		
10,250.0	10,235.6	10,192.4	10,161.7	10.7	36.5	-127.16	150.9	385.8	775.0	729.8	45.27	17.121		
10,300.0	10,284.1	10,240.3	10,209.3	10.7	36.7	-119.91	151.9	390.0	786.1	740.7	45.45	17.297		
10,350.0	10,331.5	10,286.8	10,255.7	10.7	36.8	-115.96	152.9	394.1	798.4	752.8	45.62	17.499		
10,400.0	10,377.4	10,331.8	10,300.5	10.7	37.0	-113.51	153.8	398.0	811.9	766.2	45.80	17.730		
10,450.0	10,421.4	10,374.9	10,343.4	10.8	37.2	-111.82	154.6	401.8	826.9	780.9	45.97	17.990		
10,500.0	10,463.3	10,415.7	10,384.1	10.8	37.3	-110.53	155.5	405.4	843.4	797.3	46.14	18.281		
10,550.0	10,502.5	10,454.0	10,422.2	10.9	37.5	-109.41	156.2	408.8	861.6	815.3	46.31	18.606		
10,600.0	10,539.0	10,489.4	10,457.4	10.9	37.6	-108.30	157.0	411.9	881.5	835.1	46.48	18.965		
10,650.0	10,572.4	10,521.7	10,489.6	11.0	37.7	-107.06	157.6	414.8	903.4	856.7	46.66	19.360		
10,700.0	10,602.4	10,550.5	10,518.3	11.1	37.8	-105.60	158.2	417.3	927.1	880.3	46.84	19.791		
10,750.0	10,628.8	10,575.9	10,543.5	11.2	37.9	-103.82	158.7	419.5	952.8	905.7	47.03	20.260		
10,800.0	10,651.5	10,597.4	10,565.0	11.2	38.0	-101.64	159.2	421.4	980.3	933.1	47.21	20.764		

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Reference Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	CABO WABO FED COM #705H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design CABO WABO FEDERAL PROJECT (ATLAS 2529) - CABO WABO FED COM #805H - OWB - PWP0												Offset Site Error: 3.0 usft		
Survey Program: 0-MWD+IFR1+FDIR												Offset Well Error: 3.0 usft		
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.0	0.0	0.0	0.0	3.0	3.0	-89.77	1.4	-347.7	347.8					
100.0	100.0	95.0	95.0	3.0	3.0	-89.77	1.4	-347.7	347.7	341.7	6.00	57.934		
200.0	200.0	195.0	195.0	3.0	3.0	-89.77	1.4	-347.7	347.7	341.7	6.04	57.598		
300.0	300.0	295.0	295.0	3.0	3.1	-89.77	1.4	-347.7	347.7	341.6	6.12	56.860		
400.0	400.0	395.0	395.0	3.0	3.2	-89.77	1.4	-347.7	347.7	341.5	6.23	55.782		
500.0	500.0	495.0	495.0	3.1	3.4	-89.77	1.4	-347.7	347.7	341.4	6.39	54.435		
600.0	600.0	595.0	595.0	3.1	3.6	-89.77	1.4	-347.7	347.7	341.2	6.57	52.895		
700.0	700.0	695.0	695.0	3.1	3.8	-89.77	1.4	-347.7	347.7	341.0	6.79	51.231		
800.0	800.0	795.0	795.0	3.2	4.0	-89.77	1.4	-347.7	347.7	340.7	7.02	49.503		
900.0	900.0	895.0	895.0	3.2	4.2	-89.77	1.4	-347.7	347.7	340.5	7.28	47.757		
1,000.0	1,000.0	995.0	995.0	3.2	4.5	-89.77	1.4	-347.7	347.7	340.2	7.56	46.027		
1,100.0	1,100.0	1,095.0	1,095.0	3.3	4.8	-89.77	1.4	-347.7	347.7	339.9	7.84	44.336		
1,200.0	1,200.0	1,195.0	1,195.0	3.4	5.0	-89.77	1.4	-347.7	347.7	339.6	8.14	42.700		
1,300.0	1,300.0	1,295.0	1,295.0	3.4	5.3	-89.77	1.4	-347.7	347.7	339.3	8.45	41.130		
1,400.0	1,400.0	1,395.0	1,395.0	3.5	5.6	-89.77	1.4	-347.7	347.7	339.0	8.77	39.630		
1,500.0	1,500.0	1,495.0	1,495.0	3.5	5.9	-89.77	1.4	-347.7	347.7	338.6	9.10	38.203		
1,600.0	1,600.0	1,595.0	1,595.0	3.6	6.3	-89.77	1.4	-347.7	347.7	338.3	9.44	36.847		
1,700.0	1,700.0	1,695.0	1,695.0	3.7	6.6	-89.77	1.4	-347.7	347.7	338.0	9.78	35.562		
1,800.0	1,800.0	1,795.0	1,795.0	3.8	6.9	-89.77	1.4	-347.7	347.7	337.6	10.12	34.346		
1,900.0	1,900.0	1,895.0	1,895.0	3.9	7.2	-89.77	1.4	-347.7	347.7	337.3	10.48	33.195		
2,000.0	2,000.0	1,995.0	1,995.0	3.9	7.5	-89.77	1.4	-347.7	347.7	336.9	10.83	32.105		
2,100.0	2,100.0	2,095.0	2,095.0	4.0	7.9	-89.77	1.4	-347.7	347.7	336.6	11.19	31.074		
2,200.0	2,200.0	2,195.0	2,195.0	4.1	8.2	-89.77	1.4	-347.7	347.7	336.2	11.55	30.097		
2,300.0	2,300.0	2,295.0	2,295.0	4.2	8.5	-89.77	1.4	-347.7	347.7	335.8	11.92	29.172		
2,400.0	2,400.0	2,395.0	2,395.0	4.3	8.9	-89.77	1.4	-347.7	347.7	335.5	12.29	28.296		
2,500.0	2,500.0	2,495.0	2,495.0	4.4	9.2	-89.77	1.4	-347.7	347.7	335.1	12.66	27.464		
2,600.0	2,600.0	2,595.0	2,595.0	4.5	9.6	-89.77	1.4	-347.7	347.7	334.7	13.04	26.675		
2,700.0	2,700.0	2,695.0	2,695.0	4.6	9.9	-89.77	1.4	-347.7	347.7	334.3	13.41	25.925		
2,800.0	2,800.0	2,795.0	2,795.0	4.7	10.2	-89.77	1.4	-347.7	347.7	334.0	13.79	25.213		
2,900.0	2,900.0	2,895.0	2,895.0	4.8	10.6	-89.77	1.4	-347.7	347.7	333.6	14.17	24.535		
3,000.0	3,000.0	2,995.0	2,995.0	4.9	10.9	-89.77	1.4	-347.7	347.7	333.2	14.56	23.889		
3,100.0	3,100.0	3,095.0	3,095.0	5.0	11.3	-89.77	1.4	-347.7	347.7	332.8	14.94	23.273		
3,200.0	3,200.0	3,195.0	3,195.0	5.1	11.6	-89.77	1.4	-347.7	347.7	332.4	15.33	22.686		
3,300.0	3,300.0	3,295.0	3,295.0	5.2	12.0	-89.77	1.4	-347.7	347.7	332.0	15.72	22.126		
3,400.0	3,400.0	3,395.0	3,395.0	5.3	12.3	-89.77	1.4	-347.7	347.7	331.6	16.11	21.590		
3,500.0	3,500.0	3,495.0	3,495.0	5.4	12.7	-89.77	1.4	-347.7	347.7	331.2	16.50	21.078		
3,600.0	3,600.0	3,595.0	3,595.0	5.5	13.0	-89.77	1.4	-347.7	347.7	330.9	16.89	20.589		
3,700.0	3,700.0	3,695.0	3,695.0	5.7	13.4	-89.77	1.4	-347.7	347.7	330.5	17.28	20.120		
3,800.0	3,800.0	3,795.0	3,795.0	5.8	13.7	-89.77	1.4	-347.7	347.7	330.1	17.68	19.670		
3,900.0	3,900.0	3,895.0	3,895.0	5.9	14.1	-89.77	1.4	-347.7	347.7	329.7	18.08	19.239		
4,000.0	4,000.0	3,995.0	3,995.0	6.0	14.4	-89.77	1.4	-347.7	347.7	329.3	18.47	18.825		
4,100.0	4,100.0	4,095.0	4,095.0	6.1	14.8	-89.77	1.4	-347.7	347.7	328.9	18.87	18.428		
4,200.0	4,200.0	4,195.0	4,195.0	6.2	15.1	-89.77	1.4	-347.7	347.7	328.5	19.27	18.046		
4,300.0	4,300.0	4,295.0	4,295.0	6.3	15.5	-89.77	1.4	-347.7	347.7	328.1	19.67	17.679		
4,400.0	4,400.0	4,395.0	4,395.0	6.5	15.8	-89.77	1.4	-347.7	347.7	327.7	20.07	17.326		
4,500.0	4,500.0	4,495.0	4,495.0	6.6	16.2	-89.77	1.4	-347.7	347.7	327.3	20.47	16.985		
4,600.0	4,600.0	4,595.0	4,595.0	6.7	16.5	-89.77	1.4	-347.7	347.7	326.9	20.88	16.658		
4,700.0	4,700.0	4,695.0	4,695.0	6.8	16.9	-89.77	1.4	-347.7	347.7	326.5	21.28	16.342		
4,800.0	4,800.0	4,795.0	4,795.0	6.9	17.2	-89.77	1.4	-347.7	347.7	326.1	21.68	16.037		
4,900.0	4,900.0	4,895.0	4,895.0	7.0	17.6	-89.77	1.4	-347.7	347.7	325.7	22.09	15.743		
5,000.0	5,000.0	4,995.0	4,995.0	7.2	17.9	-89.77	1.4	-347.7	347.7	325.3	22.49	15.459		

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

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Reference Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	CABO WABO FED COM #705H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design CABO WABO FEDERAL PROJECT (ATLAS 2529) - CABO WABO FED COM #805H - OWB - PWP0													Offset Site Error:	3.0 usft
Survey Program: 0-MWD+IFR1+FDIR													Offset Well Error:	3.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	5,100.0	5,095.0	5,095.0	7.3	18.3	-89.77		1.4	-347.7	347.7	324.8	22.90	15.185	
5,200.0	5,200.0	5,195.0	5,195.0	7.4	18.6	-89.77		1.4	-347.7	347.7	324.4	23.31	14.919	
5,300.0	5,300.0	5,295.0	5,295.0	7.5	19.0	-89.77		1.4	-347.7	347.7	324.0	23.72	14.663	
5,400.0	5,400.0	5,395.0	5,395.0	7.6	19.3	-89.77		1.4	-347.7	347.7	323.6	24.12	14.415	
5,500.0	5,500.0	5,495.0	5,495.0	7.8	19.7	-89.77		1.4	-347.7	347.7	323.2	24.53	14.175	
5,600.0	5,600.0	5,590.8	5,590.8	7.8	20.0	9.88		2.7	-348.3	346.6	321.7	24.93	13.905	
5,700.0	5,699.8	5,690.5	5,690.4	7.9	20.4	10.55		5.7	-349.5	342.7	317.4	25.34	13.525	
5,722.3	5,722.1	5,712.8	5,712.7	7.9	20.5	10.72		6.4	-349.8	341.4	315.9	25.43	13.423	
5,800.0	5,799.5	5,790.2	5,790.1	7.9	20.7	11.31		8.7	-350.7	336.5	310.7	25.76	13.062	
5,900.0	5,899.2	5,889.9	5,889.7	7.9	21.1	12.09		11.8	-351.9	330.2	304.0	26.19	12.610	
6,000.0	5,998.9	5,989.6	5,989.4	7.9	21.4	12.90		14.8	-353.1	324.0	297.4	26.62	12.171	
6,100.0	6,098.6	6,089.3	6,089.0	8.0	21.8	13.74		17.8	-354.4	317.9	290.8	27.06	11.746	
6,200.0	6,198.3	6,189.0	6,188.7	8.0	22.1	14.62		20.8	-355.6	311.9	284.3	27.51	11.335	
6,300.0	6,298.0	6,288.7	6,288.3	8.0	22.5	15.53		23.9	-356.8	305.9	277.9	27.97	10.936	
6,400.0	6,397.7	6,388.4	6,388.0	8.1	22.9	16.47		26.9	-358.0	300.0	271.6	28.43	10.551	
6,500.0	6,497.4	6,488.1	6,487.6	8.1	23.2	17.46		29.9	-359.2	294.2	265.3	28.90	10.178	
6,600.0	6,597.1	6,587.8	6,587.3	8.2	23.6	18.48		32.9	-360.4	288.5	259.1	29.38	9.819	
6,700.0	6,696.8	6,687.5	6,686.9	8.2	23.9	19.54		36.0	-361.7	282.8	253.0	29.86	9.472	
6,800.0	6,796.5	6,787.2	6,786.6	8.2	24.3	20.65		39.0	-362.9	277.3	247.0	30.35	9.137	
6,900.0	6,896.2	6,886.9	6,886.2	8.3	24.6	21.80		42.0	-364.1	271.9	241.0	30.84	8.815	
7,000.0	6,995.9	6,986.6	6,985.9	8.3	25.0	23.00		45.0	-365.3	266.6	235.2	31.34	8.505	
7,100.0	7,095.6	7,086.3	7,085.5	8.4	25.3	24.24		48.0	-366.5	261.4	229.6	31.85	8.208	
7,200.0	7,195.3	7,186.0	7,185.2	8.5	25.7	25.54		51.1	-367.7	256.4	224.0	32.36	7.922	
7,300.0	7,295.0	7,285.7	7,284.8	8.5	26.0	26.88		54.1	-369.0	251.4	218.6	32.87	7.648	
7,400.0	7,394.7	7,385.4	7,384.5	8.6	26.4	28.28		57.1	-370.2	246.7	213.3	33.39	7.387	
7,500.0	7,494.4	7,485.1	7,484.1	8.6	26.7	29.73		60.1	-371.4	242.0	208.1	33.92	7.136	
7,600.0	7,594.1	7,584.8	7,583.8	8.7	27.1	31.24		63.2	-372.6	237.6	203.1	34.44	6.898	
7,700.0	7,693.8	7,684.5	7,683.4	8.7	27.5	32.80		66.2	-373.8	233.3	198.3	34.97	6.671	
7,800.0	7,793.5	7,784.2	7,783.1	8.8	27.8	34.42		69.2	-375.0	229.2	193.7	35.50	6.456	
7,900.0	7,893.2	7,883.9	7,882.7	8.9	28.2	36.10		72.2	-376.3	225.3	189.2	36.03	6.252	
8,000.0	7,992.9	7,983.6	7,982.3	8.9	28.5	37.84		75.3	-377.5	221.6	185.0	36.57	6.059	
8,100.0	8,092.6	8,083.3	8,082.0	9.0	28.9	39.63		78.3	-378.7	218.1	181.0	37.10	5.878	
8,200.0	8,192.3	8,183.0	8,181.6	9.1	29.2	41.48		81.3	-379.9	214.8	177.1	37.63	5.708	
8,300.0	8,292.0	8,282.7	8,281.3	9.2	29.6	43.38		84.3	-381.1	211.7	173.6	38.16	5.549	
8,400.0	8,391.7	8,382.4	8,380.9	9.2	29.9	45.34		87.4	-382.3	208.9	170.2	38.68	5.401	
8,500.0	8,491.4	8,482.1	8,480.6	9.3	30.3	47.35		90.4	-383.6	206.4	167.2	39.20	5.264	
8,600.0	8,591.1	8,581.8	8,580.2	9.4	30.7	49.41		93.4	-384.8	204.1	164.3	39.72	5.138	
8,700.0	8,690.8	8,681.5	8,679.9	9.5	31.0	51.51		96.4	-386.0	202.0	161.8	40.22	5.023	
8,800.0	8,790.5	8,781.2	8,779.5	9.5	31.4	53.64		99.4	-387.2	200.3	159.6	40.72	4.918	
8,900.0	8,890.2	8,880.9	8,879.2	9.6	31.7	55.82		102.5	-388.4	198.8	157.6	41.22	4.824	
9,000.0	8,989.9	8,980.6	8,978.8	9.7	32.1	58.02		105.5	-389.6	197.6	155.9	41.70	4.740	
9,100.0	9,089.6	9,080.3	9,078.5	9.8	32.4	60.25		108.5	-390.9	196.8	154.6	42.17	4.666	
9,200.0	9,189.3	9,180.0	9,178.1	9.9	32.8	62.49		111.5	-392.1	196.2	153.6	42.63	4.602	
9,300.0	9,289.0	9,279.7	9,277.8	10.0	33.1	64.74		114.6	-393.3	195.9	152.8	43.08	4.547	
9,339.2	9,328.1	9,318.8	9,316.8	10.0	33.3	65.62		115.7	-393.8	195.9	152.6	43.26	4.529 CC	
9,400.0	9,388.7	9,379.5	9,377.4	10.0	33.5	66.99		117.6	-394.5	195.9	152.4	43.52	4.502	
9,500.0	9,488.4	9,479.2	9,477.1	10.1	33.9	69.24		120.6	-395.7	196.3	152.3	43.95	4.466 ES	
9,600.0	9,588.1	9,578.9	9,576.7	10.2	34.2	71.48		123.6	-396.9	196.9	152.6	44.37	4.438	
9,700.0	9,687.8	9,678.6	9,676.4	10.3	34.6	73.70		126.7	-398.2	197.9	153.1	44.77	4.419	
9,800.0	9,787.5	9,778.3	9,776.0	10.4	34.9	75.90		129.7	-399.4	199.1	153.9	45.17	4.408	
9,900.0	9,887.2	9,878.0	9,875.6	10.5	35.3	78.06		132.7	-400.6	200.6	155.1	45.56	4.404	

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

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Reference Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	CABO WABO FED COM #705H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design CABO WABO FEDERAL PROJECT (ATLAS 2529) - CABO WABO FED COM #805H - OWB - PWP0													Offset Site Error:	3.0 usft
Survey Program: 0-MWD+IFR1+FDIR													Offset Well Error:	3.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,000.0	9,986.9	9,977.7	9,975.3	10.6	35.6	80.19		135.7	-401.8	202.4	156.5	45.93	4.407	
10,100.0	10,086.6	10,077.4	10,074.9	10.7	36.0	82.28		138.7	-403.0	204.5	158.3	46.26	4.421	
10,152.2	10,138.7	10,129.4	10,127.0	10.7	36.2	83.36		140.3	-403.7	205.7	159.3	46.42	4.432	
10,200.0	10,186.2	10,176.9	10,174.5	10.7	36.3	126.56		141.8	-404.2	208.8	162.2	46.57	4.484	
10,250.0	10,235.6	10,226.1	10,223.6	10.7	36.5	143.70		143.3	-404.8	216.2	169.5	46.71	4.629	
10,300.0	10,284.1	10,274.3	10,271.8	10.7	36.7	151.80		144.7	-405.4	228.0	181.1	46.86	4.865	
10,350.0	10,331.5	10,321.3	10,318.7	10.7	36.9	156.71		146.1	-406.0	244.0	196.9	47.01	5.189	
10,400.0	10,377.4	10,366.6	10,364.0	10.7	37.0	160.12		147.5	-406.5	264.1	216.9	47.16	5.599	
10,450.0	10,421.4	10,409.9	10,407.3	10.8	37.2	162.66		148.8	-407.1	288.2	240.9	47.32	6.091	
10,500.0	10,463.3	10,450.9	10,448.3	10.8	37.3	164.61		150.1	-407.6	316.2	268.7	47.48	6.659	
10,550.0	10,502.5	10,489.3	10,486.6	10.9	37.5	166.13		151.2	-408.0	347.7	300.1	47.65	7.297	
10,600.0	10,539.0	10,524.7	10,522.1	10.9	37.6	167.30		152.3	-408.5	382.6	334.7	47.81	8.001	
10,650.0	10,572.4	10,557.0	10,554.3	11.0	37.7	168.17		153.3	-408.9	420.4	372.5	47.98	8.763	
10,700.0	10,602.4	10,585.8	10,583.1	11.1	37.8	168.76		154.2	-409.2	461.0	412.9	48.13	9.579	
10,750.0	10,628.8	10,610.9	10,608.2	11.2	37.9	169.07		154.9	-409.5	504.1	455.8	48.28	10.441	
10,800.0	10,651.5	10,632.2	10,629.5	11.2	38.0	169.04		155.6	-409.8	549.2	500.7	48.41	11.344	
10,850.0	10,670.1	10,649.5	10,646.8	11.3	38.0	168.54		156.1	-410.0	596.0	547.4	48.53	12.282	
10,900.0	10,684.7	10,662.7	10,659.9	11.4	38.1	167.14		156.5	-410.2	644.1	595.5	48.62	13.248	
10,950.0	10,695.1	10,671.6	10,668.8	11.5	38.1	163.42		156.8	-410.3	693.3	644.6	48.69	14.238	
11,000.0	10,701.2	11,939.9	11,435.0	11.6	40.8	178.07		-585.6	-412.0	739.2	693.8	45.36	16.298	
11,044.7	10,703.0	11,984.5	11,435.0	11.7	40.9	178.09		-630.2	-411.6	737.4	691.9	45.49	16.212	
11,100.0	10,703.1	12,039.9	11,435.0	11.9	40.9	178.11		-685.6	-411.0	737.3	691.7	45.66	16.148	
11,200.0	10,703.2	12,139.9	11,435.0	12.2	41.0	178.14		-785.6	-410.0	737.2	691.2	46.02	16.020	
11,300.0	10,703.3	12,239.9	11,435.0	12.5	41.2	178.16		-885.6	-409.0	737.1	690.7	46.42	15.878	
11,400.0	10,703.4	12,339.9	11,435.0	13.0	41.3	178.19		-985.6	-408.0	737.0	690.1	46.88	15.721	
11,500.0	10,703.5	12,439.9	11,435.0	13.5	41.5	178.22		-1,085.6	-407.0	736.9	689.5	47.38	15.551	
11,600.0	10,703.6	12,539.9	11,435.0	14.0	41.7	178.25		-1,185.6	-406.0	736.8	688.8	47.93	15.370	
11,700.0	10,703.7	12,639.9	11,435.0	14.6	41.9	178.28		-1,285.6	-405.0	736.6	688.1	48.53	15.180	
11,800.0	10,703.8	12,739.9	11,435.0	15.2	42.1	178.31		-1,385.5	-404.0	736.5	687.4	49.17	14.980	
11,900.0	10,703.9	12,839.9	11,435.0	15.9	42.4	178.33		-1,485.5	-403.0	736.4	686.6	49.85	14.774	
12,000.0	10,704.0	12,939.9	11,435.0	16.5	42.6	178.36		-1,585.5	-402.0	736.3	685.7	50.56	14.562	
12,100.0	10,704.1	13,039.9	11,435.0	17.2	42.9	178.39		-1,685.5	-401.0	736.2	684.9	51.32	14.344	
12,200.0	10,704.2	13,139.9	11,435.0	18.0	43.2	178.42		-1,785.5	-400.0	736.1	684.0	52.12	14.124	
12,300.0	10,704.3	13,239.9	11,435.0	18.7	43.5	178.45		-1,885.5	-399.1	736.0	683.0	52.94	13.901	
12,400.0	10,704.4	13,339.9	11,435.0	19.4	43.8	178.48		-1,985.5	-398.1	735.8	682.0	53.81	13.676	
12,500.0	10,704.5	13,439.9	11,435.0	20.2	44.2	178.50		-2,085.5	-397.1	735.7	681.0	54.70	13.450	
12,600.0	10,704.6	13,539.9	11,435.0	20.9	44.5	178.53		-2,185.5	-396.1	735.6	680.0	55.62	13.225	
12,700.0	10,704.7	13,639.9	11,435.0	21.7	44.9	178.56		-2,285.5	-395.1	735.5	678.9	56.57	13.001	
12,800.0	10,704.8	13,739.9	11,435.0	22.5	45.3	178.59		-2,385.5	-394.1	735.4	677.8	57.55	12.777	
12,900.0	10,704.9	13,839.9	11,435.0	23.3	45.7	178.62		-2,485.5	-393.1	735.3	676.7	58.56	12.556	
13,000.0	10,705.0	13,939.9	11,435.0	24.0	46.1	178.65		-2,585.5	-392.1	735.2	675.6	59.59	12.337	
13,100.0	10,705.1	14,039.9	11,435.0	24.8	46.5	178.67		-2,685.5	-391.1	735.1	674.4	60.64	12.121	
13,200.0	10,705.2	14,139.9	11,435.0	25.6	46.9	178.70		-2,785.5	-390.1	734.9	673.2	61.72	11.908	
13,300.0	10,705.4	14,239.9	11,435.0	26.4	47.3	178.73		-2,885.5	-389.1	734.8	672.0	62.81	11.699	
13,400.0	10,705.5	14,339.9	11,435.0	27.2	47.8	178.76		-2,985.5	-388.1	734.7	670.8	63.93	11.493	
13,500.0	10,705.6	14,439.9	11,435.0	28.1	48.2	178.79		-3,085.4	-387.1	734.6	669.5	65.06	11.291	
13,600.0	10,705.7	14,539.9	11,435.0	28.9	48.7	178.82		-3,185.4	-386.1	734.5	668.3	66.21	11.093	
13,700.0	10,705.8	14,639.9	11,435.0	29.7	49.2	178.85		-3,285.4	-385.1	734.4	667.0	67.38	10.899	
13,800.0	10,705.9	14,739.9	11,435.0	30.5	49.7	178.87		-3,385.4	-384.1	734.3	665.7	68.57	10.709	
13,900.0	10,706.0	14,839.9	11,435.0	31.3	50.2	178.90		-3,485.4	-383.1	734.2	664.4	69.77	10.523	
14,000.0	10,706.1	14,939.9	11,435.0	32.1	50.7	178.93		-3,585.4	-382.1	734.0	663.1	70.98	10.341	

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

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Reference Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	CABO WABO FED COM #705H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design CABO WABO FEDERAL PROJECT (ATLAS 2529) - CABO WABO FED COM #805H - OWB - PWP0												Offset Site Error:	3.0 usft
Survey Program: 0-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,100.0	10,706.2	15,039.9	11,435.0	33.0	51.2	178.96	-3,685.4	-381.1	733.9	661.7	72.21	10.164	
14,200.0	10,706.3	15,139.9	11,435.0	33.8	51.8	178.99	-3,785.4	-380.1	733.8	660.4	73.45	9.991	
14,300.0	10,706.4	15,239.9	11,435.0	34.6	52.3	179.02	-3,885.4	-379.1	733.7	659.0	74.70	9.822	
14,400.0	10,706.5	15,339.9	11,435.0	35.5	52.9	179.05	-3,985.4	-378.1	733.6	657.6	75.97	9.656	
14,500.0	10,706.6	15,439.8	11,435.0	36.3	53.4	179.07	-4,085.4	-377.1	733.5	656.2	77.25	9.495	
14,600.0	10,706.7	15,539.8	11,435.0	37.1	54.0	179.10	-4,185.4	-376.1	733.4	654.8	78.53	9.338	
14,700.0	10,706.8	15,639.8	11,435.0	38.0	54.6	179.13	-4,285.4	-375.2	733.3	653.4	79.83	9.185	
14,800.0	10,706.9	15,739.8	11,435.0	38.8	55.1	179.16	-4,385.4	-374.2	733.2	652.0	81.14	9.036	
14,900.0	10,707.0	15,839.8	11,435.0	39.6	55.7	179.19	-4,485.4	-373.2	733.1	650.6	82.45	8.890	
15,000.0	10,707.1	15,939.8	11,435.0	40.5	56.3	179.22	-4,585.4	-372.2	732.9	649.2	83.78	8.749	
15,100.0	10,707.2	16,039.8	11,435.0	41.3	56.9	179.25	-4,685.4	-371.2	732.8	647.7	85.11	8.610	
15,200.0	10,707.3	16,139.8	11,435.0	42.1	57.5	179.27	-4,785.4	-370.2	732.7	646.3	86.45	8.475	
15,300.0	10,707.4	16,239.8	11,435.0	43.0	58.1	179.30	-4,885.3	-369.2	732.6	644.8	87.80	8.344	
15,400.0	10,707.5	16,339.8	11,435.0	43.8	58.8	179.33	-4,985.3	-368.2	732.5	643.3	89.16	8.216	
15,500.0	10,707.6	16,439.8	11,435.0	44.7	59.4	179.36	-5,085.3	-367.2	732.4	641.9	90.52	8.091	
15,600.0	10,707.8	16,539.8	11,435.0	45.5	60.0	179.39	-5,185.3	-366.2	732.3	640.4	91.89	7.969	
15,700.0	10,707.9	16,639.8	11,435.0	46.4	60.7	179.42	-5,285.3	-365.2	732.2	638.9	93.27	7.850	
15,800.0	10,708.0	16,739.8	11,435.0	47.2	61.3	179.45	-5,385.3	-364.2	732.1	637.4	94.65	7.735	
15,900.0	10,708.1	16,839.8	11,435.0	48.1	62.0	179.47	-5,485.3	-363.2	732.0	635.9	96.04	7.622	
16,000.0	10,708.2	16,939.8	11,435.0	48.9	62.6	179.50	-5,585.3	-362.2	731.9	634.4	97.43	7.512	
16,100.0	10,708.3	17,039.8	11,435.0	49.7	63.3	179.53	-5,685.3	-361.2	731.7	632.9	98.83	7.404	
16,200.0	10,708.4	17,139.8	11,435.0	50.6	63.9	179.56	-5,785.3	-360.2	731.6	631.4	100.23	7.300	
16,300.0	10,708.5	17,239.8	11,435.0	51.4	64.6	179.59	-5,885.3	-359.2	731.5	629.9	101.64	7.197	
16,400.0	10,708.6	17,339.8	11,435.0	52.3	65.3	179.62	-5,985.3	-358.2	731.4	628.4	103.05	7.098	
16,500.0	10,708.7	17,439.8	11,435.0	53.1	66.0	179.65	-6,085.3	-357.2	731.3	626.9	104.47	7.000	
16,600.0	10,708.8	17,539.8	11,435.0	54.0	66.6	179.68	-6,185.3	-356.2	731.2	625.3	105.89	6.905	
16,700.0	10,708.9	17,639.8	11,435.0	54.8	67.3	179.70	-6,285.3	-355.2	731.1	623.8	107.32	6.813	
16,800.0	10,709.0	17,739.8	11,435.0	55.7	68.0	179.73	-6,385.3	-354.2	731.0	622.3	108.75	6.722	
16,900.0	10,709.1	17,839.8	11,435.0	56.5	68.7	179.76	-6,485.3	-353.2	730.9	620.7	110.18	6.634	
17,000.0	10,709.2	17,939.8	11,435.0	57.4	69.4	179.79	-6,585.2	-352.2	730.8	619.2	111.62	6.547	
17,100.0	10,709.3	18,039.8	11,435.0	58.2	70.1	179.82	-6,685.2	-351.3	730.7	617.6	113.06	6.463	
17,200.0	10,709.4	18,139.8	11,435.0	59.1	70.8	179.85	-6,785.2	-350.3	730.6	616.1	114.50	6.380	
17,300.0	10,709.5	18,239.8	11,435.0	59.9	71.5	179.88	-6,885.2	-349.3	730.5	614.5	115.95	6.300	
17,400.0	10,709.6	18,339.8	11,435.0	60.8	72.2	179.91	-6,985.2	-348.3	730.4	613.0	117.40	6.221	
17,500.0	10,709.7	18,439.8	11,435.0	61.6	73.0	179.94	-7,085.2	-347.3	730.3	611.4	118.86	6.144	
17,600.0	10,709.8	18,539.8	11,435.0	62.5	73.7	179.96	-7,185.2	-346.3	730.2	609.8	120.31	6.069	
17,700.0	10,709.9	18,639.8	11,435.0	63.4	74.4	179.99	-7,285.2	-345.3	730.1	608.3	121.77	5.995	
17,800.0	10,710.0	18,739.8	11,435.0	64.2	75.1	-179.98	-7,385.2	-344.3	730.0	606.7	123.23	5.923	
17,900.0	10,710.2	18,839.8	11,435.0	65.1	75.8	-179.95	-7,485.2	-343.3	729.8	605.1	124.70	5.853	
18,000.0	10,710.3	18,939.8	11,435.0	65.9	76.6	-179.92	-7,585.2	-342.3	729.7	603.6	126.17	5.784	
18,100.0	10,710.4	19,039.8	11,435.0	66.8	77.3	-179.89	-7,685.2	-341.3	729.6	602.0	127.64	5.717	
18,200.0	10,710.5	19,139.8	11,435.0	67.6	78.0	-179.86	-7,785.2	-340.3	729.5	600.4	129.11	5.651	
18,300.0	10,710.6	19,239.8	11,435.0	68.5	78.8	-179.83	-7,885.2	-339.3	729.4	598.9	130.58	5.586	
18,400.0	10,710.7	19,339.8	11,435.0	69.3	79.5	-179.81	-7,985.2	-338.3	729.3	597.3	132.06	5.523	
18,500.0	10,710.8	19,439.8	11,435.0	70.2	80.3	-179.78	-8,085.2	-337.3	729.2	595.7	133.54	5.461	
18,600.0	10,710.9	19,539.8	11,435.0	71.0	81.0	-179.75	-8,185.2	-336.3	729.1	594.1	135.02	5.400	
18,700.0	10,711.0	19,639.8	11,435.0	71.9	81.8	-179.72	-8,285.2	-335.3	729.0	592.5	136.50	5.341	
18,800.0	10,711.1	19,739.8	11,435.0	72.7	82.5	-179.69	-8,385.1	-334.3	728.9	590.9	137.99	5.283	
18,900.0	10,711.2	19,839.8	11,435.0	73.6	83.3	-179.66	-8,485.1	-333.3	728.8	589.3	139.47	5.226	
19,000.0	10,711.3	19,939.8	11,435.0	74.5	84.0	-179.63	-8,585.1	-332.3	728.7	587.8	140.96	5.170	
19,100.0	10,711.4	20,039.8	11,435.0	75.3	84.8	-179.60	-8,685.1	-331.3	728.6	586.2	142.45	5.115	

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

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Reference Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	CABO WABO FED COM #705H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design CABO WABO FEDERAL PROJECT (ATLAS 2529) - CABO WABO FED COM #805H - OWB - PWP0													Offset Site Error:	3.0 usft
Survey Program: 0-MWD+IFR1+FDIR													Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
19,200.0	10,711.5	20,139.8	11,435.0	76.2	85.5	-179.57	-8,785.1	-330.3	728.5	584.6	143.94	5.061		
19,300.0	10,711.6	20,239.8	11,435.0	77.0	86.3	-179.54	-8,885.1	-329.3	728.4	583.0	145.44	5.008		
19,400.0	10,711.7	20,339.8	11,435.0	77.9	87.1	-179.52	-8,985.1	-328.3	728.3	581.4	146.93	4.957		
19,500.0	10,711.8	20,439.8	11,435.0	78.7	87.8	-179.49	-9,085.1	-327.4	728.2	579.8	148.43	4.906		
19,600.0	10,711.9	20,539.8	11,435.0	79.6	88.6	-179.46	-9,185.1	-326.4	728.1	578.2	149.93	4.856		
19,700.0	10,712.0	20,639.8	11,435.0	80.5	89.4	-179.43	-9,285.1	-325.4	728.0	576.6	151.43	4.808		
19,800.0	10,712.1	20,739.8	11,435.0	81.3	90.1	-179.40	-9,385.1	-324.4	727.9	575.0	152.93	4.760		
19,900.0	10,712.2	20,839.8	11,435.0	82.2	90.9	-179.37	-9,485.1	-323.4	727.8	573.4	154.43	4.713		
20,000.0	10,712.3	20,939.8	11,435.0	83.0	91.7	-179.34	-9,585.1	-322.4	727.7	571.8	155.93	4.667		
20,100.0	10,712.4	21,039.8	11,435.0	83.9	92.4	-179.31	-9,685.1	-321.4	727.6	570.2	157.44	4.622		
20,200.0	10,712.6	21,139.8	11,435.0	84.7	93.2	-179.28	-9,785.1	-320.4	727.5	568.6	158.95	4.577		
20,300.0	10,712.7	21,239.8	11,435.0	85.6	94.0	-179.25	-9,885.1	-319.4	727.4	567.0	160.45	4.533		
20,400.0	10,712.8	21,339.8	11,435.0	86.5	94.8	-179.23	-9,985.1	-318.4	727.3	565.3	161.96	4.491		
20,500.0	10,712.9	21,439.8	11,435.0	87.3	95.6	-179.20	-10,085.0	-317.4	727.2	563.7	163.47	4.449		
20,600.0	10,713.0	21,539.8	11,435.0	88.2	96.3	-179.17	-10,185.0	-316.4	727.1	562.1	164.98	4.407		
20,628.6	10,713.0	21,568.4	11,435.0	88.3	96.6	-179.16	-10,213.7	-316.1	727.1	561.8	165.30	4.398 SF		

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Reference Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	CABO WABO FED COM #705H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB=27' @ 3188.0usft (Nabors 893)

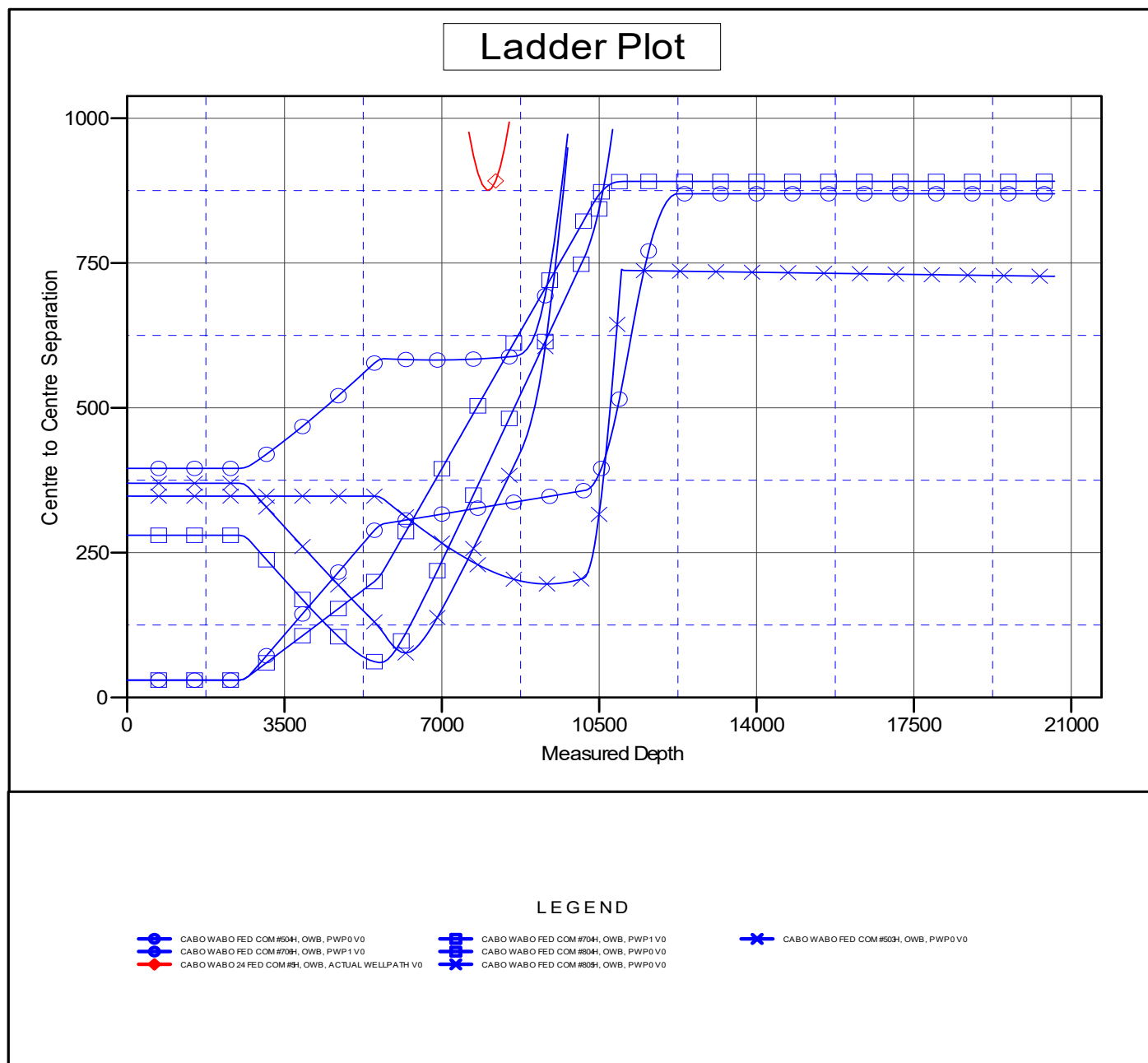
Offset Depths are relative to Offset Datum

Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: CABO WABO FED COM #705H

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

Grid Convergence at Surface is: 0.21°



Concho Resources LLC

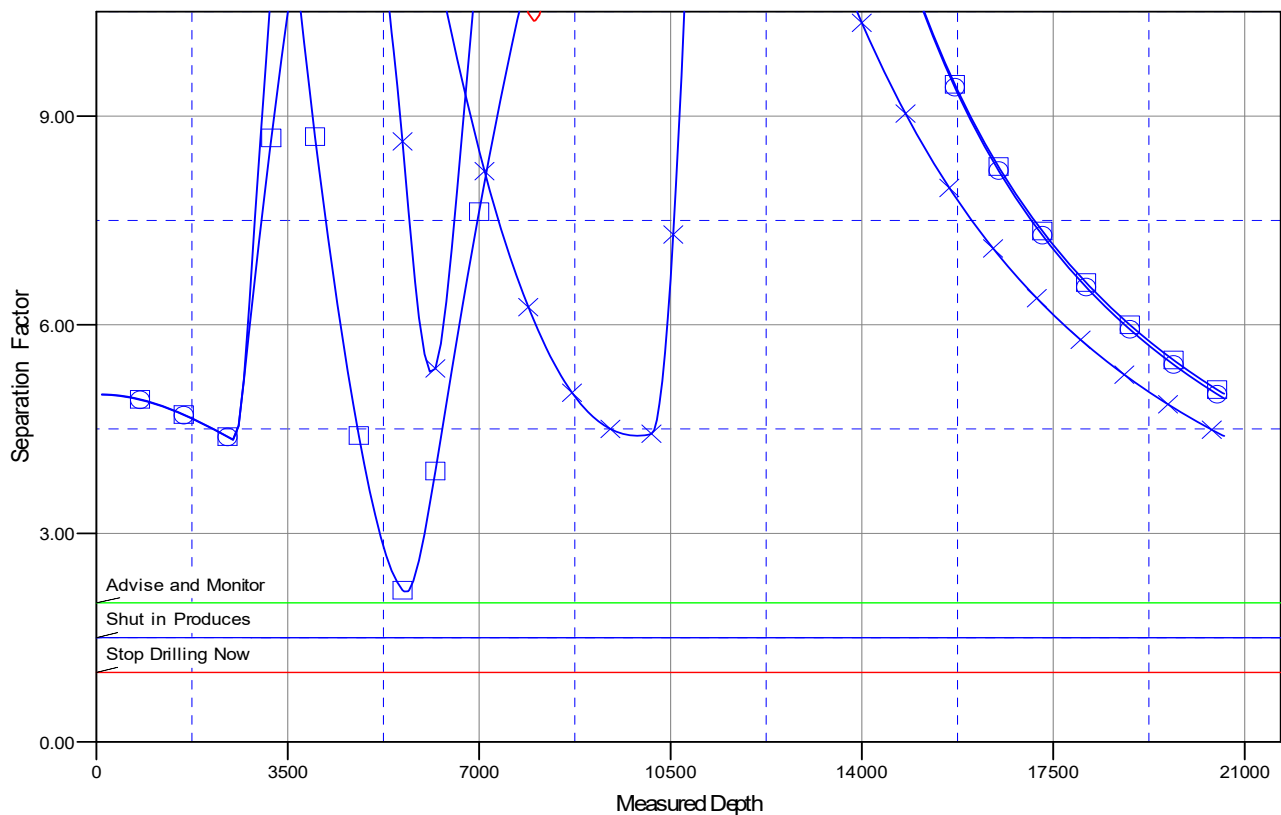
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Reference Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	CABO WABO FED COM #705H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB=27' @ 3188.0usft (Nabors 893)
 Offset Depths are relative to Offset Datum
 Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: CABO WABO FED COM #705H
 Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
 Grid Convergence at Surface is: 0.21°

Separation Factor Plot



LEGEND

CABO WABO FED COM #504H, OWB, PWP0 V0	CABO WABO FED COM #704H, OWB, PWP1 V0	CABO WABO FED COM #903H, OWB, PWP0 V0
CABO WABO FED COM #704H, OWB, PWP1 V0	CABO WABO FED COM #804H, OWB, PWP0 V0	
CABO WABO 24 FED COM #81, OWB, ACTUAL WELLPATH V0	CABO WABO FED COM #805H, OWB, PWP0 V0	

DELAWARE BASIN WEST

ATLAS PROSPECT (NM-E)

CABO WABO FEDERAL PROJECT (ATLAS 2529)

CABO WABO FED COM #705H

OWB

Plan: PWP2

Standard Survey Report

26 May, 2020

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Well:	CABO WABO FED COM #705H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP2	Database:	edm

Project	ATLAS PROSPECT (NM-E)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Well	CABO WABO FED COM #705H			
Well Position	+N/-S	0.0 usft	Northing:	408,352.15 usft
	+E/-W	0.0 usft	Easting:	621,589.81 usft
Position Uncertainty		3.0 usft	Wellhead Elevation:	usft
			Latitude:	32° 7' 19.442 N
			Longitude:	103° 56' 26.094 W
			Ground Level:	3,161.0 usft

Wellbore	OWB
-----------------	-----

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/3/2020	6.82	59.88	47,562.51211171

Design	PWP2
---------------	------

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	181.83

Survey Tool Program		Date	5/26/2020	
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	10,039.0	PWP2 (OWB)	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4
10,039.0	20,627.8	PWP2 (OWB)	MWD+IFR1+FDIR	OWSG MWD + IFR1 + FDIR Correction

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	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
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Well:	CABO WABO FED COM #705H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP2	Database:	edm

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Well:	CABO WABO FED COM #705H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP2	Database:	edm

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Start Build 2.00									
5,600.0	2.00	260.61	5,600.0	-0.3	-1.7	0.3	2.00	2.00	0.00
5,700.0	4.00	260.61	5,699.8	-1.1	-6.9	1.4	2.00	2.00	0.00
5,722.3	4.45	260.61	5,722.1	-1.4	-8.5	1.7	2.00	2.00	0.00
Start 4429.9 hold at 5722.3 MD									
5,800.0	4.45	260.61	5,799.5	-2.4	-14.4	2.8	0.00	0.00	0.00
5,900.0	4.45	260.61	5,899.2	-3.7	-22.1	4.4	0.00	0.00	0.00
6,000.0	4.45	260.61	5,998.9	-4.9	-29.7	5.9	0.00	0.00	0.00
6,100.0	4.45	260.61	6,098.6	-6.2	-37.4	7.4	0.00	0.00	0.00
6,200.0	4.45	260.61	6,198.3	-7.4	-45.0	8.9	0.00	0.00	0.00
6,300.0	4.45	260.61	6,298.0	-8.7	-52.7	10.4	0.00	0.00	0.00
6,400.0	4.45	260.61	6,397.7	-10.0	-60.3	11.9	0.00	0.00	0.00
6,500.0	4.45	260.61	6,497.4	-11.2	-68.0	13.4	0.00	0.00	0.00
6,600.0	4.45	260.61	6,597.1	-12.5	-75.6	14.9	0.00	0.00	0.00
6,700.0	4.45	260.61	6,696.8	-13.8	-83.3	16.4	0.00	0.00	0.00
6,800.0	4.45	260.61	6,796.5	-15.0	-90.9	17.9	0.00	0.00	0.00
6,900.0	4.45	260.61	6,896.2	-16.3	-98.6	19.4	0.00	0.00	0.00
7,000.0	4.45	260.61	6,995.9	-17.6	-106.2	20.9	0.00	0.00	0.00
7,100.0	4.45	260.61	7,095.6	-18.8	-113.9	22.5	0.00	0.00	0.00
7,200.0	4.45	260.61	7,195.3	-20.1	-121.5	24.0	0.00	0.00	0.00
7,300.0	4.45	260.61	7,295.0	-21.4	-129.2	25.5	0.00	0.00	0.00
7,400.0	4.45	260.61	7,394.7	-22.6	-136.8	27.0	0.00	0.00	0.00
7,500.0	4.45	260.61	7,494.4	-23.9	-144.5	28.5	0.00	0.00	0.00
7,600.0	4.45	260.61	7,594.1	-25.1	-152.1	30.0	0.00	0.00	0.00
7,700.0	4.45	260.61	7,693.8	-26.4	-159.8	31.5	0.00	0.00	0.00
7,800.0	4.45	260.61	7,793.5	-27.7	-167.4	33.0	0.00	0.00	0.00
7,900.0	4.45	260.61	7,893.2	-28.9	-175.1	34.5	0.00	0.00	0.00
8,000.0	4.45	260.61	7,992.9	-30.2	-182.7	36.0	0.00	0.00	0.00
8,100.0	4.45	260.61	8,092.6	-31.5	-190.4	37.5	0.00	0.00	0.00
8,200.0	4.45	260.61	8,192.3	-32.7	-198.0	39.0	0.00	0.00	0.00
8,300.0	4.45	260.61	8,292.0	-34.0	-205.6	40.5	0.00	0.00	0.00
8,400.0	4.45	260.61	8,391.7	-35.3	-213.3	42.1	0.00	0.00	0.00
8,500.0	4.45	260.61	8,491.4	-36.5	-220.9	43.6	0.00	0.00	0.00
8,600.0	4.45	260.61	8,591.1	-37.8	-228.6	45.1	0.00	0.00	0.00
8,700.0	4.45	260.61	8,690.8	-39.1	-236.2	46.6	0.00	0.00	0.00
8,800.0	4.45	260.61	8,790.5	-40.3	-243.9	48.1	0.00	0.00	0.00
8,900.0	4.45	260.61	8,890.2	-41.6	-251.5	49.6	0.00	0.00	0.00
9,000.0	4.45	260.61	8,989.9	-42.9	-259.2	51.1	0.00	0.00	0.00
9,100.0	4.45	260.61	9,089.6	-44.1	-266.8	52.6	0.00	0.00	0.00
9,200.0	4.45	260.61	9,189.3	-45.4	-274.5	54.1	0.00	0.00	0.00
9,300.0	4.45	260.61	9,289.0	-46.6	-282.1	55.6	0.00	0.00	0.00
9,400.0	4.45	260.61	9,388.7	-47.9	-289.8	57.1	0.00	0.00	0.00
9,500.0	4.45	260.61	9,488.4	-49.2	-297.4	58.6	0.00	0.00	0.00

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Well:	CABO WABO FED COM #705H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP2	Database:	edm

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,600.0	4.45	260.61	9,588.1	-50.4	-305.1	60.1	0.00	0.00	0.00
9,700.0	4.45	260.61	9,687.8	-51.7	-312.7	61.7	0.00	0.00	0.00
9,800.0	4.45	260.61	9,787.5	-53.0	-320.4	63.2	0.00	0.00	0.00
9,900.0	4.45	260.61	9,887.2	-54.2	-328.0	64.7	0.00	0.00	0.00
10,000.0	4.45	260.61	9,986.9	-55.5	-335.7	66.2	0.00	0.00	0.00
10,100.0	4.45	260.61	10,086.6	-56.8	-343.3	67.7	0.00	0.00	0.00
10,152.2	4.45	260.61	10,138.7	-57.4	-347.3	68.5	0.00	0.00	0.00
Start DLS 10.00 TFO -81.00									
10,200.0	7.01	218.26	10,186.2	-60.0	-350.9	71.2	10.00	5.37	-88.65
10,300.0	16.07	195.10	10,284.1	-78.2	-358.3	89.6	10.00	9.06	-23.16
10,400.0	25.83	188.77	10,377.4	-113.2	-365.3	124.8	10.00	9.75	-6.33
10,500.0	35.71	185.77	10,463.3	-163.9	-371.6	175.7	10.00	9.88	-3.00
10,600.0	45.64	183.94	10,539.0	-228.8	-377.0	240.7	10.00	9.93	-1.83
10,700.0	55.59	182.65	10,602.4	-305.8	-381.3	317.8	10.00	9.95	-1.29
10,800.0	65.55	181.64	10,651.5	-392.7	-384.6	404.8	10.00	9.96	-1.01
10,900.0	75.52	180.77	10,684.7	-486.9	-386.5	499.0	10.00	9.97	-0.86
11,000.0	85.49	179.98	10,701.2	-585.4	-387.1	597.4	10.00	9.97	-0.79
11,044.7	89.94	179.64	10,703.0	-630.0	-387.0	642.0	10.00	9.97	-0.77
Start 9584.0 hold at 11044.7 MD									
11,100.0	89.94	179.64	10,703.1	-685.3	-386.7	697.3	0.00	0.00	0.00
11,200.0	89.94	179.64	10,703.2	-785.3	-386.0	797.3	0.00	0.00	0.00
11,300.0	89.94	179.64	10,703.3	-885.3	-385.4	897.2	0.00	0.00	0.00
11,400.0	89.94	179.64	10,703.4	-985.3	-384.8	997.1	0.00	0.00	0.00
11,500.0	89.94	179.64	10,703.5	-1,085.3	-384.1	1,097.0	0.00	0.00	0.00
11,600.0	89.94	179.64	10,703.6	-1,185.3	-383.5	1,197.0	0.00	0.00	0.00
11,700.0	89.94	179.64	10,703.7	-1,285.3	-382.9	1,296.9	0.00	0.00	0.00
11,800.0	89.94	179.64	10,703.8	-1,385.3	-382.3	1,396.8	0.00	0.00	0.00
11,900.0	89.94	179.64	10,703.9	-1,485.3	-381.6	1,496.7	0.00	0.00	0.00
12,000.0	89.94	179.64	10,704.0	-1,585.3	-381.0	1,596.7	0.00	0.00	0.00
12,100.0	89.94	179.64	10,704.1	-1,685.3	-380.4	1,696.6	0.00	0.00	0.00
12,200.0	89.94	179.64	10,704.2	-1,785.3	-379.7	1,796.5	0.00	0.00	0.00
12,300.0	89.94	179.64	10,704.3	-1,885.3	-379.1	1,896.5	0.00	0.00	0.00
12,400.0	89.94	179.64	10,704.4	-1,985.3	-378.5	1,996.4	0.00	0.00	0.00
12,500.0	89.94	179.64	10,704.5	-2,085.3	-377.9	2,096.3	0.00	0.00	0.00
12,600.0	89.94	179.64	10,704.6	-2,185.3	-377.2	2,196.2	0.00	0.00	0.00
12,700.0	89.94	179.64	10,704.7	-2,285.3	-376.6	2,296.2	0.00	0.00	0.00
12,800.0	89.94	179.64	10,704.8	-2,385.3	-376.0	2,396.1	0.00	0.00	0.00
12,900.0	89.94	179.64	10,704.9	-2,485.3	-375.3	2,496.0	0.00	0.00	0.00
13,000.0	89.94	179.64	10,705.0	-2,585.3	-374.7	2,595.9	0.00	0.00	0.00
13,100.0	89.94	179.64	10,705.1	-2,685.3	-374.1	2,695.9	0.00	0.00	0.00
13,200.0	89.94	179.64	10,705.2	-2,785.3	-373.5	2,795.8	0.00	0.00	0.00
13,300.0	89.94	179.64	10,705.4	-2,885.3	-372.8	2,895.7	0.00	0.00	0.00
13,400.0	89.94	179.64	10,705.5	-2,985.3	-372.2	2,995.7	0.00	0.00	0.00

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Well:	CABO WABO FED COM #705H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP2	Database:	edm

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,500.0	89.94	179.64	10,705.6	-3,085.3	-371.6	3,095.6	0.00	0.00	0.00
13,600.0	89.94	179.64	10,705.7	-3,185.3	-370.9	3,195.5	0.00	0.00	0.00
13,700.0	89.94	179.64	10,705.8	-3,285.3	-370.3	3,295.4	0.00	0.00	0.00
13,800.0	89.94	179.64	10,705.9	-3,385.3	-369.7	3,395.4	0.00	0.00	0.00
13,900.0	89.94	179.64	10,706.0	-3,485.3	-369.1	3,495.3	0.00	0.00	0.00
14,000.0	89.94	179.64	10,706.1	-3,585.3	-368.4	3,595.2	0.00	0.00	0.00
14,100.0	89.94	179.64	10,706.2	-3,685.3	-367.8	3,695.1	0.00	0.00	0.00
14,200.0	89.94	179.64	10,706.3	-3,785.3	-367.2	3,795.1	0.00	0.00	0.00
14,300.0	89.94	179.64	10,706.4	-3,885.3	-366.5	3,895.0	0.00	0.00	0.00
14,400.0	89.94	179.64	10,706.5	-3,985.3	-365.9	3,994.9	0.00	0.00	0.00
14,500.0	89.94	179.64	10,706.6	-4,085.3	-365.3	4,094.8	0.00	0.00	0.00
14,600.0	89.94	179.64	10,706.7	-4,185.3	-364.7	4,194.8	0.00	0.00	0.00
14,700.0	89.94	179.64	10,706.8	-4,285.3	-364.0	4,294.7	0.00	0.00	0.00
14,800.0	89.94	179.64	10,706.9	-4,385.3	-363.4	4,394.6	0.00	0.00	0.00
14,900.0	89.94	179.64	10,707.0	-4,485.3	-362.8	4,494.6	0.00	0.00	0.00
15,000.0	89.94	179.64	10,707.1	-4,585.3	-362.1	4,594.5	0.00	0.00	0.00
15,100.0	89.94	179.64	10,707.2	-4,685.3	-361.5	4,694.4	0.00	0.00	0.00
15,200.0	89.94	179.64	10,707.3	-4,785.3	-360.9	4,794.3	0.00	0.00	0.00
15,300.0	89.94	179.64	10,707.4	-4,885.3	-360.3	4,894.3	0.00	0.00	0.00
15,400.0	89.94	179.64	10,707.5	-4,985.3	-359.6	4,994.2	0.00	0.00	0.00
15,500.0	89.94	179.64	10,707.6	-5,085.3	-359.0	5,094.1	0.00	0.00	0.00
15,600.0	89.94	179.64	10,707.8	-5,185.3	-358.4	5,194.0	0.00	0.00	0.00
15,700.0	89.94	179.64	10,707.9	-5,285.2	-357.8	5,294.0	0.00	0.00	0.00
15,800.0	89.94	179.64	10,708.0	-5,385.2	-357.1	5,393.9	0.00	0.00	0.00
15,900.0	89.94	179.64	10,708.1	-5,485.2	-356.5	5,493.8	0.00	0.00	0.00
16,000.0	89.94	179.64	10,708.2	-5,585.2	-355.9	5,593.8	0.00	0.00	0.00
16,100.0	89.94	179.64	10,708.3	-5,685.2	-355.2	5,693.7	0.00	0.00	0.00
16,200.0	89.94	179.64	10,708.4	-5,785.2	-354.6	5,793.6	0.00	0.00	0.00
16,300.0	89.94	179.64	10,708.5	-5,885.2	-354.0	5,893.5	0.00	0.00	0.00
16,400.0	89.94	179.64	10,708.6	-5,985.2	-353.4	5,993.5	0.00	0.00	0.00
16,500.0	89.94	179.64	10,708.7	-6,085.2	-352.7	6,093.4	0.00	0.00	0.00
16,600.0	89.94	179.64	10,708.8	-6,185.2	-352.1	6,193.3	0.00	0.00	0.00
16,700.0	89.94	179.64	10,708.9	-6,285.2	-351.5	6,293.2	0.00	0.00	0.00
16,800.0	89.94	179.64	10,709.0	-6,385.2	-350.8	6,393.2	0.00	0.00	0.00
16,900.0	89.94	179.64	10,709.1	-6,485.2	-350.2	6,493.1	0.00	0.00	0.00
17,000.0	89.94	179.64	10,709.2	-6,585.2	-349.6	6,593.0	0.00	0.00	0.00
17,100.0	89.94	179.64	10,709.3	-6,685.2	-349.0	6,693.0	0.00	0.00	0.00
17,200.0	89.94	179.64	10,709.4	-6,785.2	-348.3	6,792.9	0.00	0.00	0.00
17,300.0	89.94	179.64	10,709.5	-6,885.2	-347.7	6,892.8	0.00	0.00	0.00
17,400.0	89.94	179.64	10,709.6	-6,985.2	-347.1	6,992.7	0.00	0.00	0.00
17,500.0	89.94	179.64	10,709.7	-7,085.2	-346.4	7,092.7	0.00	0.00	0.00
17,600.0	89.94	179.64	10,709.8	-7,185.2	-345.8	7,192.6	0.00	0.00	0.00

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Well:	CABO WABO FED COM #705H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP2	Database:	edm

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17,700.0	89.94	179.64	10,709.9	-7,285.2	-345.2	7,292.5	0.00	0.00	0.00
17,800.0	89.94	179.64	10,710.0	-7,385.2	-344.6	7,392.4	0.00	0.00	0.00
17,900.0	89.94	179.64	10,710.2	-7,485.2	-343.9	7,492.4	0.00	0.00	0.00
18,000.0	89.94	179.64	10,710.3	-7,585.2	-343.3	7,592.3	0.00	0.00	0.00
18,100.0	89.94	179.64	10,710.4	-7,685.2	-342.7	7,692.2	0.00	0.00	0.00
18,200.0	89.94	179.64	10,710.5	-7,785.2	-342.0	7,792.1	0.00	0.00	0.00
18,300.0	89.94	179.64	10,710.6	-7,885.2	-341.4	7,892.1	0.00	0.00	0.00
18,400.0	89.94	179.64	10,710.7	-7,985.2	-340.8	7,992.0	0.00	0.00	0.00
18,500.0	89.94	179.64	10,710.8	-8,085.2	-340.2	8,091.9	0.00	0.00	0.00
18,600.0	89.94	179.64	10,710.9	-8,185.2	-339.5	8,191.9	0.00	0.00	0.00
18,700.0	89.94	179.64	10,711.0	-8,285.2	-338.9	8,291.8	0.00	0.00	0.00
18,800.0	89.94	179.64	10,711.1	-8,385.2	-338.3	8,391.7	0.00	0.00	0.00
18,900.0	89.94	179.64	10,711.2	-8,485.2	-337.6	8,491.6	0.00	0.00	0.00
19,000.0	89.94	179.64	10,711.3	-8,585.2	-337.0	8,591.6	0.00	0.00	0.00
19,100.0	89.94	179.64	10,711.4	-8,685.2	-336.4	8,691.5	0.00	0.00	0.00
19,200.0	89.94	179.64	10,711.5	-8,785.2	-335.8	8,791.4	0.00	0.00	0.00
19,300.0	89.94	179.64	10,711.6	-8,885.2	-335.1	8,891.3	0.00	0.00	0.00
19,400.0	89.94	179.64	10,711.7	-8,985.2	-334.5	8,991.3	0.00	0.00	0.00
19,500.0	89.94	179.64	10,711.8	-9,085.2	-333.9	9,091.2	0.00	0.00	0.00
19,600.0	89.94	179.64	10,711.9	-9,185.2	-333.2	9,191.1	0.00	0.00	0.00
19,700.0	89.94	179.64	10,712.0	-9,285.2	-332.6	9,291.1	0.00	0.00	0.00
19,800.0	89.94	179.64	10,712.1	-9,385.2	-332.0	9,391.0	0.00	0.00	0.00
19,900.0	89.94	179.64	10,712.2	-9,485.2	-331.4	9,490.9	0.00	0.00	0.00
20,000.0	89.94	179.64	10,712.3	-9,585.2	-330.7	9,590.8	0.00	0.00	0.00
20,100.0	89.94	179.64	10,712.4	-9,685.2	-330.1	9,690.8	0.00	0.00	0.00
20,200.0	89.94	179.64	10,712.6	-9,785.2	-329.5	9,790.7	0.00	0.00	0.00
20,300.0	89.94	179.64	10,712.7	-9,885.2	-328.8	9,890.6	0.00	0.00	0.00
20,400.0	89.94	179.64	10,712.8	-9,985.2	-328.2	9,990.5	0.00	0.00	0.00
20,500.0	89.94	179.64	10,712.9	-10,085.2	-327.6	10,090.5	0.00	0.00	0.00
20,600.0	89.94	179.64	10,713.0	-10,185.1	-327.0	10,190.4	0.00	0.00	0.00
20,628.6	89.94	179.64	10,713.0	-10,213.8	-326.8	10,219.0	0.00	0.00	0.00
TD at 20628.6									

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well CABO WABO FED COM #705H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Site:	CABO WABO FEDERAL PROJECT (ATLAS 2529)	MD Reference:	KB=27' @ 3188.0usft (Nabors 893)
Well:	CABO WABO FED COM #705H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP2	Database:	edm

Design Targets

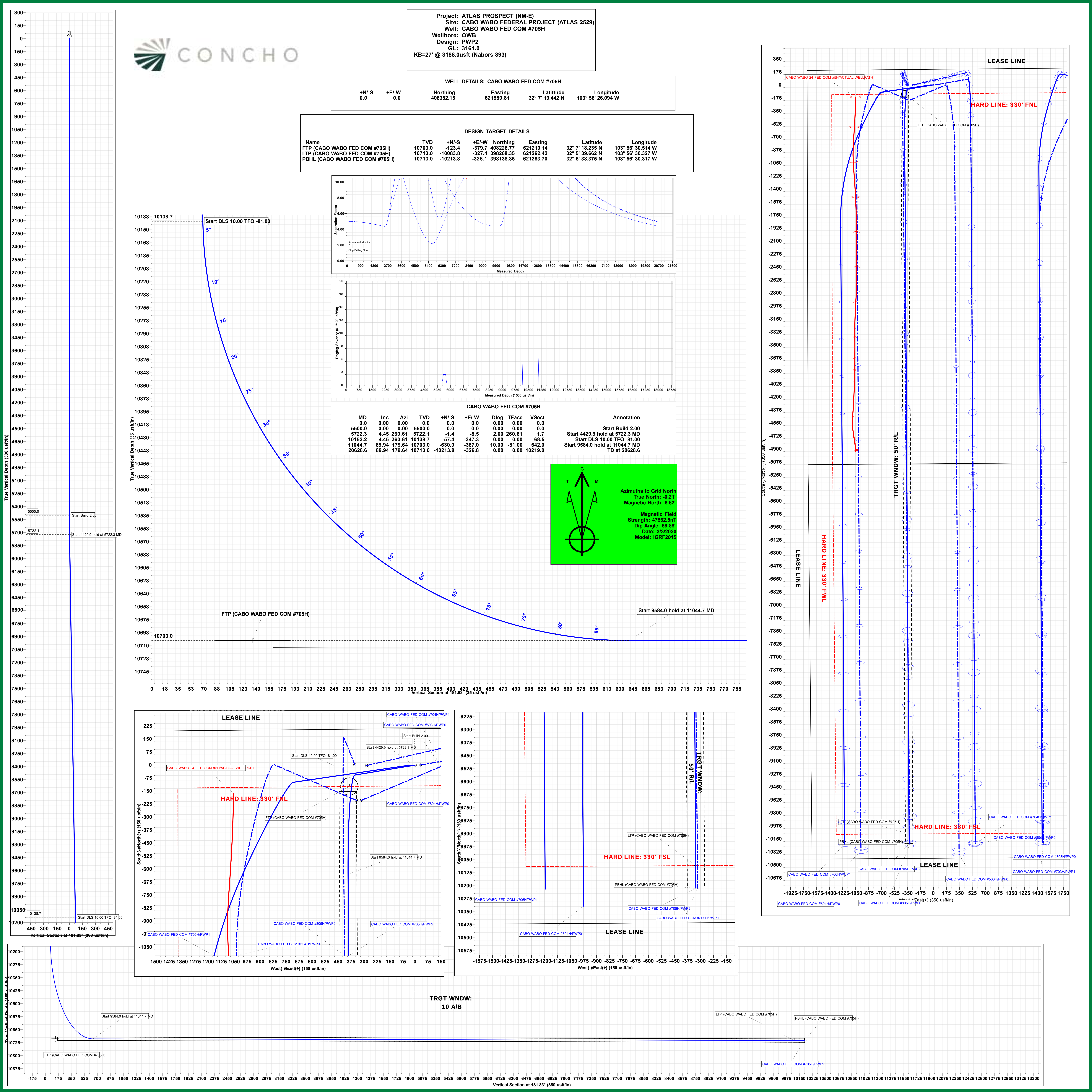
Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
FTP (CABO WABO FI - plan misses target center by 192.1usft at 10622.9usft MD (10554.7 TVD, -245.4 N, -378.1 E) - Circle (radius 50.0)	0.00	0.01	10,703.0	-123.4	-379.7	408,228.77	621,210.14	32° 7' 18.235 N	103° 56' 30.514 W
LTP (CABO WABO FE - plan misses target center by 0.3usft at 20498.7usft MD (10712.9 TVD, -10083.8 N, -327.6 E) - Point	0.00	0.00	10,713.0	-10,083.8	-327.4	398,268.35	621,262.42	32° 5' 39.662 N	103° 56' 30.327 W
PBHL (CABO WABO - plan misses target center by 0.7usft at 20628.6usft MD (10713.0 TVD, -10213.8 N, -326.8 E) - Rectangle (sides W100.0 H10,061.0 D20.0)	-0.06	359.64	10,713.0	-10,213.8	-326.1	398,138.35	621,263.70	32° 5' 38.375 N	103° 56' 30.317 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5500	5500	0	0	Start Build 2.00
5722	5722	-1	-9	Start 4429.9 hold at 5722.3 MD
10,152	10,139	-57	-347	Start DLS 10.00 TFO -81.00
11,045	10,703	-630	-387	Start 9584.0 hold at 11044.7 MD
20,629	10,713	-10,214	-327	TD at 20628.6

Checked By: _____ Approved By: _____ Date: _____



COG Operating LLC

Rig Plat & Closed Loop Equipment Diagram

Well pad will be 400' X 400'
with cellar in center of pad

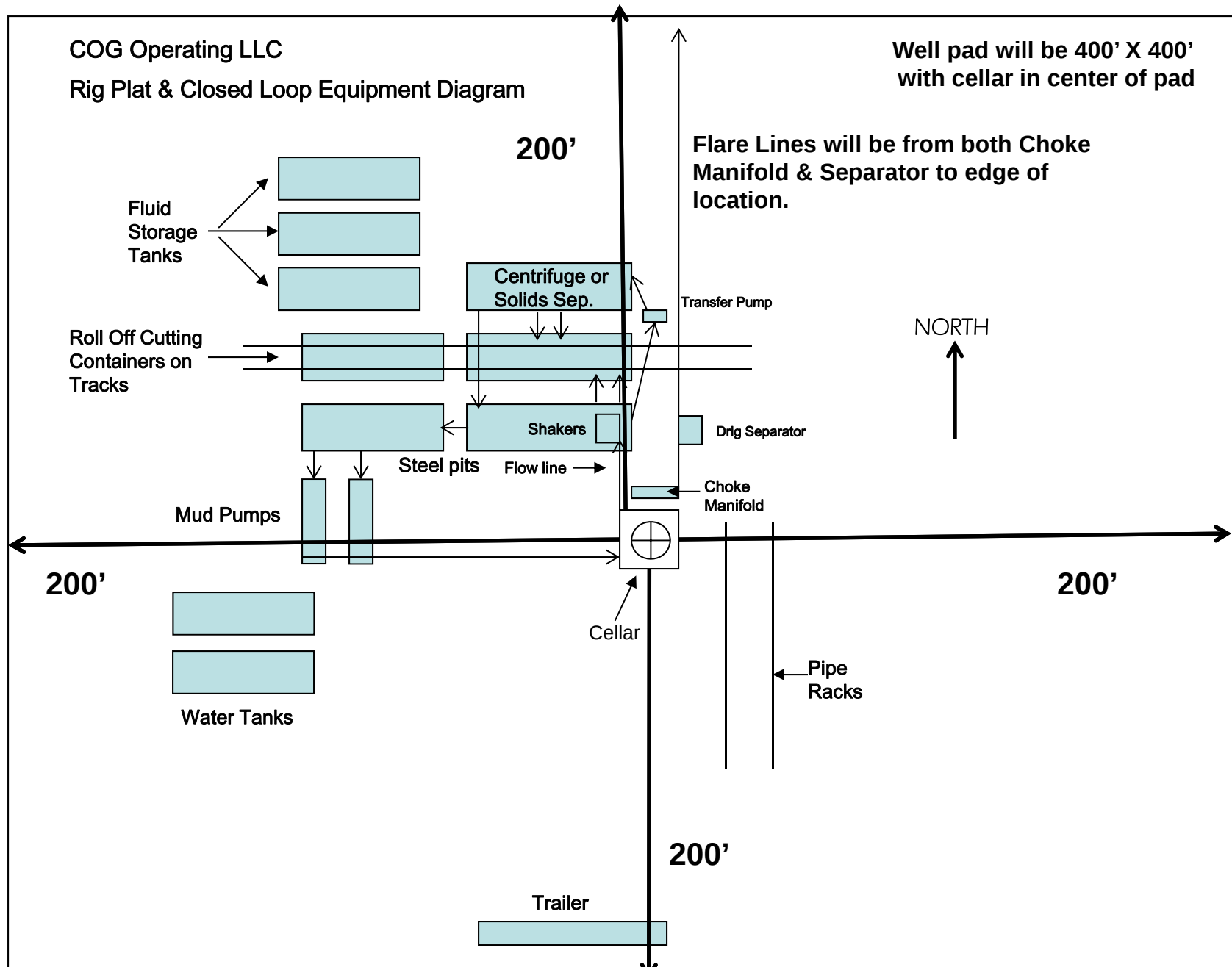


Exhibit 1

"I further certify that COG will comply with Rule 19.15.17
NMAC by using a Closed Loop System."

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Submit Original
to Appropriate
District Office

GAS CAPTURE PLAN

Date: 5/28/20

☒ Original

Operator & OGRID No.: COG Production LLC, (217955)

☐ Amended - Reason for Amendment:

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomple to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
Cabo Wabo Federal Com 701H	30-015-	A-24-25S-29E	210' FNL & 880' FEL	±4200	None Planned	APD Submission Plan Subject to change
Cabo Wabo Federal Com 702H	30-015-	A-24-25S-29E	210' FNL & 910' FEL	±4200	None Planned	APD Submission Plan Subject to change
Cabo Wabo Federal Com 703H	30-015-	A-24-25S-29E	210' FNL & 940' FEL	±4200	None Planned	APD Submission Plan Subject to change
Cabo Wabo Federal Com 704H	30-015-	C-24-25S-29E	210' FNL & 1730' FWL	±4200	None Planned	APD Submission Plan Subject to change
Cabo Wabo Federal Com 705H	30-015-	C-24-25S-29E	210' FNL & 1700' FWL	±4200	None Planned	APD Submission Plan Subject to change
Cabo Wabo Federal Com 706H	30-015-	C-24-25S-29E	210' FNL & 1670' FWL	±4200	None Planned	APD Submission Plan Subject to change

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to **ETC Field Services LLC** and will be connected to **Red Bluff** low pressure gathering system located in **Culberson** County, Texas. **COG Operating LLC** provides (periodically) to **ETC Field Services LLC** a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, **COG Operating LLC** and **ETC Field Services LLC** have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at **ETC Field Services LLC** Processing Plant located in Sec. 35, Blk. 57, T2, **Culberson** County, Texas. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on Gas Transporter system at that time. Based on current information, it is Operator's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

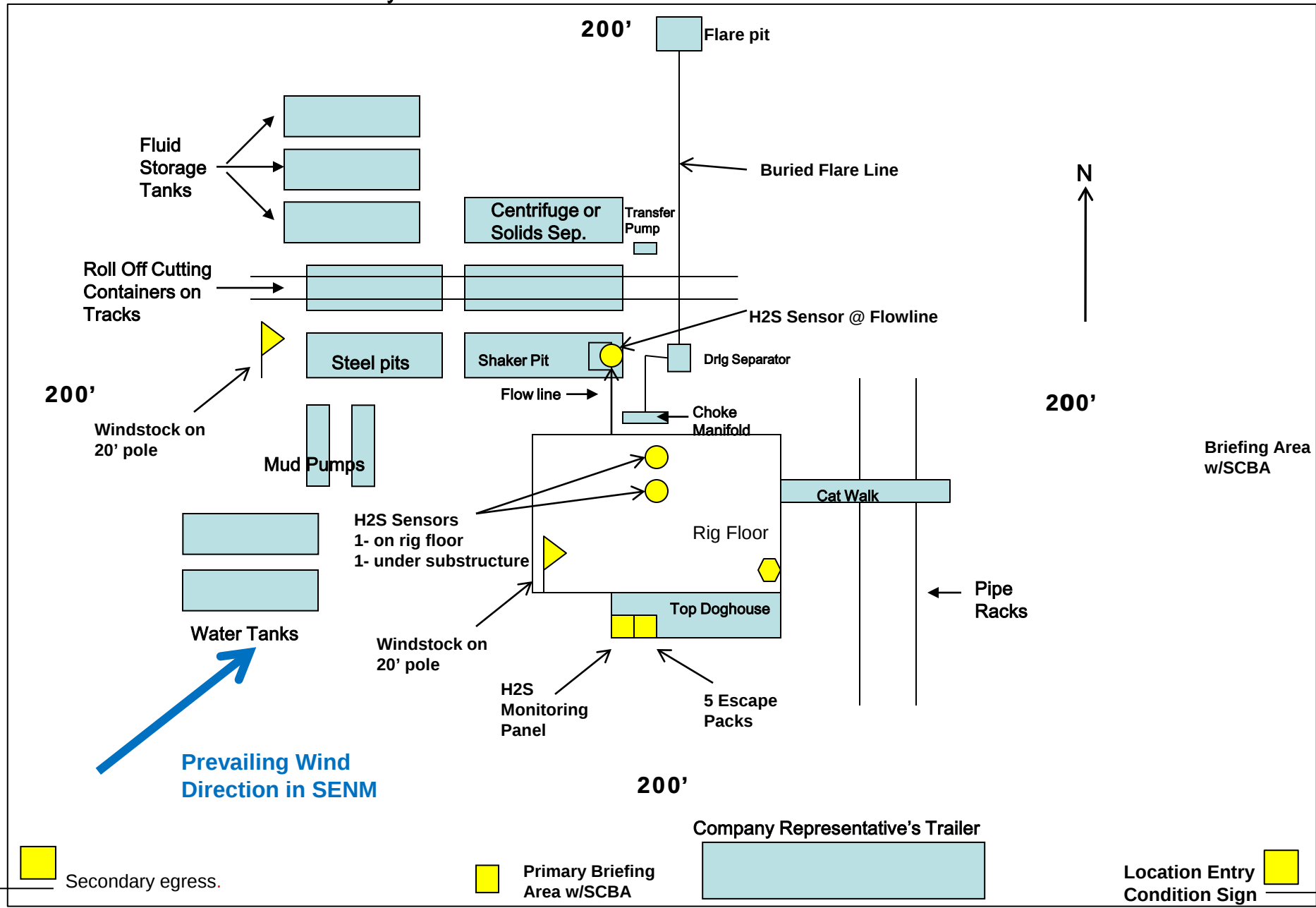
Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
 - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
 - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines

- NGL Removal – On lease
 - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

COG Operating LLC
H₂S Equipment Schematic
Terrain: Shinnery sand hills.

Well pad will be 400' x 400'
with cellar in center of pad



COG OPERATING LLC
HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

1. HYDROGEN SULFIDE TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

- a. The hazards and characteristics of hydrogen sulfide (H₂S).
- b. The proper use and maintenance of personal protective equipment and life support systems.
- c. The proper use of H₂S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
- d. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

- a. The effects of H₂S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
- b. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
- c. The contents and requirements of the H₂S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H₂S zone (within 3 days or 500 feet) and weekly H₂S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H₂S Drilling Operations Plan and the Public Protection Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

2. H₂S SAFETY EQUIPMENT AND SYSTEMS

Note: All H₂S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H₂S. If H₂S greater than 100 ppm is encountered in the gas stream we will shut in and install H₂S equipment.

- a. Well Control Equipment:
 - Flare line.
 - Choke manifold with remotely operated choke.
 - Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
 - Auxiliary equipment to include: annular preventer, mud-gas separator, rotating head.

- b. Protective equipment for essential personnel:
Mark II Surviveair 30-minute units located in the dog house and at briefing areas.
- c. H2S detection and monitoring equipment:
2 - portable H2S monitor positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 ppm are reached.
- d. Visual warning systems:
Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.
- e. Mud Program:
The mud program has been designed to minimize the volume of H2S circulated to the surface.
- f. Metallurgy:
All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.
- g. Communication:
Company vehicles equipped with cellular telephone.

COG OPERATING LLC has conducted a review to determine if an H2S contingency plan is required for the above referenced well. We were able to conclude that any potential hazardous volume would be minimal. H2S concentrations of wells in this area from surface to TD are low enough; therefore, we do not believe that an H2S contingency plan is necessary.

W A R N I N G

**YOU ARE ENTERING AN H₂S AREA
AUTHORIZED PERSONNEL ONLY**

- 1. BEARDS OR CONTACT LENSES NOT ALLOWED***
- 2. HARD HATS REQUIRED***
- 3. SMOKING IN DESIGNATED AREAS ONLY***
- 4. BE WIND CONSCIOUS AT ALL TIMES***
- 5. CK WITH COG OPERATING LLC FOREMAN AT MAIN OFFICE***

COG OPERATING LLC

1-575-748-6940

EMERGENCY CALL LIST

	<u>OFFICE</u>	<u>MOBILE</u>
COG OPERATING LLC OFFICE	575-748-6940	
SETH WILD	432-683-7443	432-528-3633
WALTER ROYE	575-748-6940	432-934-1886

EMERGENCY RESPONSE NUMBERS

	<u>OFFICE</u>
STATE POLICE	575-748-9718
EDDY COUNTY SHERIFF	575-746-2701
EMERGENCY MEDICAL SERVICES (AMBULANCE)	911 or 575-746-2701
EDDY COUNTY EMERGENCY MANAGEMENT (HARRY BURGESS)	575-887-9511
STATE EMERGENCY RESPONSE CENTER (SERC)	575-476-9620
CARLSBAD POLICE DEPARTMENT	575-885-2111
CARLSBAD FIRE DEPARTMENT	575-885-3125
NEW MEXICO OIL CONSERVATION DIVISION	575-748-1283
INDIAN FIRE & SAFETY	800-530-8693
HALLIBURTON SERVICES	800-844-8451