

Well Name: FEZ FEDERAL COM	Well Location: T25S / R35E / SEC 9 / SWSE / 32.138547 / -103.368908	County or Parish/State: LEA / NM
Well Number: 707H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM125658	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002546244	Well Status: Approved Application for Permit to Drill	Operator: COG OPERATING LLC

Notice of Intent

Type of Submission: Notice of Intent	Type of Action APD Change
Date Sundry Submitted: 01/23/2021	Time Sundry Submitted: 03:30
Date proposed operation will begin: 02/01/2021	

Procedure Description: COG Operating LLC respectfully requests approval for the following changes to the originally approved APD's. BHL Change. From: 50' FNL and 1330' FEL Section 4 T25S. R35E. To: 50' FSL and 660' FEL Section 4 T25S. R35E. C102 Attached Directional Plan attached. AC Collision Report attached.

Application

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Section 1 - General

APD ID: 10400040581	Tie to previous NOS?	Submission Date:
BLM Office: CARLSBAD	User: MAYTE REYES	Title: Regulatory Analyst
Federal/Indian APD: FED	Is the first lease penetrated for production Federal or Indian? FED	
Lease number: NMNM125658	Lease Acres:	
Surface access agreement in place?	Allotted?	Reservation:
Agreement in place? NO	Federal or Indian agreement:	
Agreement number:		
Agreement name:		
Keep application confidential? Y		
Permitting Agent? NO	APD Operator: COG OPERATING LLC	
Operator letter of designation:		

Operator Info

Operator Organization Name: COG OPERATING LLC		
Operator Address: 600 West Illinois Ave		Zip: 79701
Operator PO Box:		
Operator City: Midland	State: TX	
Operator Phone: (432)683-7443		
Operator Internet Address: RODOM@CONCHO.COM		

Section 2 - Well Information

Well in Master Development Plan? NO	Master Development Plan name:	
Well in Master SUPO? NO	Master SUPO name:	
Well in Master Drilling Plan? NO	Master Drilling Plan name:	
Well Name: FEZ FEDERAL COM	Well Number: 707H	Well API Number: 3002546244
Field/Pool or Exploratory? Field and Pool	Field Name: WC-025 G-09 S243532M	Pool Name: WOLFBONE
Is the proposed well in an area containing other mineral resources? USEABLE WATER		
Is the proposed well in a Helium production area? N	Use Existing Well Pad? N	New surface disturbance?
Type of Well Pad: MULTIPLE WELL	Multiple Well Pad Name: FEZ FEDERAL COM	Number: 710H, 707H
Well Class: HORIZONTAL	Number of Legs: 1	
Well Work Type: Drill		
Well Type: OIL WELL		
Describe Well Type:		

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Is the proposed well in an area containing other mineral resources? USEABLE WATER

Well sub-Type: EXPLORATORY (WILDCAT)

Describe sub-type:

Distance to town: 9 Miles

Distance to nearest well: 30 FT

Distance to lease line: 50 FT

Reservoir well spacing assigned acres Measurement: 641.64 Acres

Well plat: COG_Fez_707H_C102_20190403151702.pdf
Fez_Federal_Com_707H_C102_20210123152813.pdf

Well work start Date: 10/01/2019

Duration: 30 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83

Vertical Datum: NAVD88

Survey number:

Reference Datum: GROUND LEVEL

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
SHL Leg #1	330	FSL	1540	FEL	25S	35E	9	Aliquot SWSE	32.138547	-103.368908	LEA	NEW MEXICO	NEW MEXICO	F	NMNM125658	3238	0	0	Y
KOP Leg #1	330	FSL	1540	FEL	25S	35E	9	Aliquot SWSE	32.138547	-103.368908	LEA	NEW MEXICO	NEW MEXICO	F	NMNM125658	3238	0	0	Y
PPP Leg #1-1	100	FSL	660	FEL	25S	35E	9	Aliquot SESE	32.137918	-103.366066	LEA	NEW MEXICO	NEW MEXICO	F	NMNM125658	-8870	12200	12108	Y

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Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
PPP Leg #1-2	2639	FNL	660	FEL	25S	35E	9	Aliquot SENE	32.144896	-103.36606	LEA	NEW MEXICO	NEW MEXICO	F	FEE	-9225	15100	12463	Y
EXIT Leg #1	100	FNL	660	FEL	25S	35E	4	Lot 1	32.166453	-103.3660419	LEA	NEW MEXICO	NEW MEXICO	F	FEE	-8971	22478	12209	Y
BHL Leg #1	50	FNL	660	FEL	25S	35E	4	Lot 1	32.16659	-103.3660419	LEA	NEW MEXICO	NEW MEXICO	F	FEE	-8971	22528	12209	Y

Drilling Plan

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1506911	UNKNOWN	3238	0	0		NONE	N
1506912	RUSTLER	2478	760	760		NONE	N
1506913	TOP SALT	2133	1105	1105	SALT	NONE	N
1506914	BASE OF SALT	-1661	4899	4899	ANHYDRITE	NONE	N
1506915	LAMAR	-2042	5280	5280	LIMESTONE	NATURAL GAS, OIL	N
1506918	BELL CANYON	-2098	5336	5336		NONE	N
1506926	CHERRY CANYON	-3013	6251	6251		NATURAL GAS, OIL	N
1506927	BRUSHY CANYON	-4521	7759	7759		NATURAL GAS, OIL	N
1506916	BONE SPRING LIME	-5737	8975	8975	SANDSTONE	NATURAL GAS, OIL	N
1506921	UPPER AVALON SHALE	-5982	9220	9220		NATURAL GAS, OIL	N
1506922	---	-6434	9672	9672		NATURAL GAS, OIL	N
1506923		-7062	10300	10300		NATURAL GAS, OIL	N
1506924		-7583	10821	10821		NATURAL GAS, OIL	N
1506925		-8680	11918	11918		NATURAL GAS, OIL	N

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Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1506917	WOLFCAMP	-9056	12294	12294	SHALE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 10M

Rating Depth: 12756

Equipment: Annular, Blind Ram, Pipe Ram. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold

Requesting Variance? YES

Variance request: A 5M variance is requested on a 10M system. (A 5M variance is attached on section 8). A variance is requested for the use of a flexible choke line from the BOP to the choke manifold. See attached for specs and hydrostatic test chart.

Testing Procedure: 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.

Choke Diagram Attachment:

COG_Fez_707H_10M_Choke_20190404091445.pdf

BOP Diagram Attachment:

COG_Fez_707H_Flex_Hose_20190404091506.pdf

COG_Fez_707H_10M_BOP_20190522140437.pdf

Pressure Rating (PSI): 5M

Rating Depth: 11850

Equipment: Annular. Accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold.

Requesting Variance? YES

Variance request: A variance is requested for the use of a flexible choke line from the BOP to the choke manifold. See attached for specs and hydrostatic test chart.

Testing Procedure: 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.

Choke Diagram Attachment:

COG_Fez_707H_5M_Choke_20190404091600.pdf

BOP Diagram Attachment:

COG_Fez_707H_5M_BOP_20190404091607.pdf

COG_Fez_707H_Flex_Hose_20190404091626.pdf

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Unit or CA Name:

Unit or CA Number:

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Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	
1	SURFACE	17.5	13.375	NEW	API	N	0	1000	0	1000	3238	2238	1000	J-55	54.5	ST&C	2.53	7.05	DRY	9.43	DRY	9.43
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	11850	0	11850	-9411	-8612	11850	HCL-80	47	OTHER - BTC	1.49	1.05	DRY	2.01	DRY	2.01
3	PRODUCTION	8.5	5.5	NEW	API	N	0	22528	0	12209	-9411	-8971	22528	P-110	23	OTHER - BTC	1.79	2.11	DRY	2.52	DRY	2.52

Casing Attachments

Casing ID: 1

String Type: SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

COG_Fez_707H_Casing_Prog_20190404091710.pdf

COG_Fez_707H_Casing_Prog_20210122080040.pdf

Casing ID: 2

String Type: INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

COG_Fez_707H_Casing_Prog_20190404091703.pdf

COG_Fez_707H_Casing_Prog_20210122080052.pdf

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Allottee or Tribe Name:

Lease Number: NMNM125658

Unit or CA Name:

Unit or CA Number:

US Well Number: 3002546244

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Casing Attachments

Casing ID: 3String Type:PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

COG_Fez_707H_Casing_Prog_20190404091657.pdf

COG_Fez_707H_Casing_Prog_20210122080107.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	1000	410	1.75	13.5	717	50	Class C	4% Gel
SURFACE	Tail		0	1000	250	1.34	14.8	335	50	Class C	2% CaCl2
INTERMEDIATE	Lead	5200	0	5200	720	2.8	11	2016	50	NeoCem	As needed
INTERMEDIATE	Tail		0	5200	100	1.35	14.8	135	50	Class C	2% CaCl
INTERMEDIATE	Lead	5200	0	11850	1000	2.8	11	2800	50	Lead: NEOCEM. (Stage 2: Attached in section 8)	As needed
INTERMEDIATE	Tail		0	11850	300	1.1	16.4	330	50	Class H	As needed
PRODUCTION	Lead		10850	22756	400	2	12.7	800	35	Lead: 35:65:6 H BLEND	As needed
PRODUCTION	Tail		10850	22756	3000	1.24	14.4	3720	35	Tail: 50:50:2 Class H Blend	As needed

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Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM125658

Unit or CA Name:

Unit or CA Number:

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Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

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

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

Describe what will be on location to control well or mitigate other conditions: Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

Describe the mud monitoring system utilized: PVT/Pason/Visual Monitoring

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
11850	22756	OIL-BASED MUD	10.5	12.5							OBM
0	1000	OTHER : FW Gel	8.4	8.6							FW Gel
1000	11850	OTHER : Diesel Brine Emulsion	8.6	9.4							Diesel Brine Emulsion

Section 6 - Test, Logging, Coring

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

None planned

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

CNL,GR

Coring operation description for the well:

None planned

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 8130

Anticipated Surface Pressure: 5388

Anticipated Bottom Hole Temperature(F): 180

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

Describe:

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Unit or CA Name:

Unit or CA Number:

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Contingency Plans geoharzards description:
Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES
Hydrogen sulfide drilling operations plan:

- COG_Fez_707H_H2S_Schem_20190404092055.pdf
- COG_Fez_707H_H2S_SUP_20190404092102.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

- COG_Fez_707H_AC_Report_20190404092120.pdf
- COG_Fez_707H_Direct_Plan_20190404092128.pdf
- FEZ_FEDERAL_COM_707H_PWP1_SVY_RPT_20210122102921.pdf
- FEZ_FEDERAL_COM_707H_PWP1_AC_RPT_20210122102934.pdf

Other proposed operations facets description:

- Drilling program attached.
- GCP attached.
- 5M variance attached.
- Cementing program attached.

Other proposed operations facets attachment:

- COG_Fez_707H_Drilling_Prog_20190404092141.pdf
- COG_Fez_707H_GCP_20190404092213.pdf
- COG_Fez_707H_Cementing_Prog_20190522140838.pdf
- COG_Fez_707H_Drilling_Prog_20210122080314.pdf
- COG_Fez_707H_Cementing_Prog_20210122080329.pdf
- COG_Fez_707H_GCP_20210122080344.pdf

Other Variance attachment:

- COG_5M_Variance_Well_Plan_20190314081725.pdf
- COG_6.75_5M_Variance_WCP_20210122080412.pdf

SUPO

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Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

COG_Fez_707H_Existing_Road_20190403152252.pdf

Existing Road Purpose: ACCESS

Row(s) Exist? NO

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

COG_Fez_707H_Maps_Plats_20190408153418.pdf

New road type: TWO-TRACK

Length: 82.7 Feet

Width (ft.): 30

Max slope (%): 33

Max grade (%): 1

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 20

New road access erosion control: Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and to be consistent with local drainage patterns.

New road access plan or profile prepared? NO

New road access plan attachment:

Access road engineering design? NO

Access road engineering design attachment:

Turnout? N

Access surfacing type: OTHER

Access topsoil source: ONSITE

Access surfacing type description: Caliche

Access onsite topsoil source depth: 6

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Offsite topsoil source description:

Onsite topsoil removal process: Blading

Access other construction information: No turnouts are planned. Re-routing access road around proposed well location.

Access miscellaneous information:

Number of access turnouts: Access turnout map:

Drainage Control

New road drainage crossing: OTHER

Drainage Control comments: None necessary.

Road Drainage Control Structures (DCS) description: None needed.

Road Drainage Control Structures (DCS) attachment:

Access Additional Attachments

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

COG_Fez_707H_1Mile_Data_20190403152328.pdf

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

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: The Fez Federal 9P Central Tank Battery (CTB) is proposed in Section 9, T25S, R35E. Production from each of the 9 producing wells will be sent to the proposed Fez Federal 9P CTB. We plan to install 9 buried 4" FP 601HT production flowlines from each wellhead to the inlet manifold of the proposed CTB; the route for these flowlines will follow the "Mainline" route as shown in the attached plat. We will also install 1 buried 6" poly line for gas lift supply from the CTB to each production well pad; the route for this gas lift line will follow the "Mainline" route as shown in the attached plat. We will also install 1 buried 10" poly line for produced water transfer from the CTB to an existing pipeline connection in Section 16; this line will follow the "Mainline" route as shown in the attached plat.

Production Facilities map:

COG_Fez_707H_CTB_Layout_20190403152350.pdf

COG_Fez_707H_CTB_Flowlines_20190403152344.pdf

Section 5 - Location and Types of Water Supply

Water Source Table

Water source type: OTHER

Describe type: Brine

Water source use type: INTERMEDIATE/PRODUCTION CASING

Source latitude: Source longitude:

Source datum:

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	INTERMEDIATE/PRODUCTION CASING
Water source permit type:	PRIVATE CONTRACT
Water source transport method:	TRUCKING
Source land ownership:	COMMERCIAL
Source transportation land ownership:	COMMERCIAL
Water source volume (barrels): 30000	Source volume (acre-feet): 3.866793
Source volume (gal): 1260000	

Water source type:	OTHER
Describe type:	Fresh Water
Water source use type:	SURFACE CASING STIMULATION
Source latitude:	Source longitude:
Source datum:	
Water source permit type:	PRIVATE CONTRACT
Water source transport method:	PIPELINE
Source land ownership:	PRIVATE
Source transportation land ownership:	PRIVATE
Water source volume (barrels): 450000	Source volume (acre-feet): 58.001892
Source volume (gal): 18900000	

Water source and transportation map:

COG_Fez_707H_Fresh_H2O_20190403152423.pdf
COG_Fez_707H_BrineH2O_20190403152411.pdf

Water source comments: Fresh water will be obtained from Fez Fee Frac Pond located in Section 8, T25S, R35E. Brine water will be obtained from the Salty Dog Brine station located in Section 5. T19S. R36E.
New water well? NO

New Water Well Info

Well latitude:	Well Longitude:	Well datum:
Well target aquifer:		
Est. depth to top of aquifer(ft):	Est thickness of aquifer:	

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Aquifer comments:

Aquifer documentation:

Well depth (ft):	Well casing type:
Well casing outside diameter (in.):	Well casing inside diameter (in.):
New water well casing?	Used casing source:
Drilling method:	Drill material:
Grout material:	Grout depth:
Casing length (ft.):	Casing top depth (ft.):
Well Production type:	Completion Method:

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Using any construction materials: YES

Construction Materials description: Caliche will be obtained from the actual well site if available. If not available onsite, caliche will be hauled from Quail Ranch LLC (CONCHO) caliche pit located in Section 6, T24S, R35 Phone # (575) 748-6940 or Bert Madera caliche pit located in Section 6. T25S. R35E. Phone 575-631-4444.

Construction Materials source location attachment:

Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: Drilling fluids and produced oil and water during drilling and completion operations

Amount of waste: 6000 barrels

Waste disposal frequency : One Time Only

Safe containment description: All drilling waste will be stored safely and disposed of properly

Safe containmant attachment:

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

Disposal type description:

Disposal location description: Trucked to an approved disposal facility

Waste type: SEWAGE

Waste content description: Human waste and gray water

Amount of waste: 250 gallons

Waste disposal frequency : Weekly

Safe containment description: Waste will be properly contained and disposed of properly at a state approved disposal facility

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL Disposal location ownership: COMMERCIAL

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Well Name: FEZ FEDERAL COM	Well Location: T25S / R35E / SEC 9 / SWSE / 32.138547 / -103.368908	County or Parish/State: LEA / NM
Well Number: 707H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM125658	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002546244	Well Status: Approved Application for Permit to Drill	Operator: COG OPERATING LLC

FACILITY

Disposal type description:

Disposal location description: Trucked to an approved disposal facility

Waste type: GARBAGE

Waste content description: Garbage and trash produced during drilling and completion operations

Amount of waste: 125 pounds

Waste disposal frequency : Weekly

Safe containment description: Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly at a state approved disposal facility

Safe containmant attachment:

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

Disposal type description:

Disposal location description: Trucked to an approved disposal facility

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit?

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

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

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

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? YES

Description of cuttings location Roll off cuttings containers on tracks

Cuttings area length (ft.) Cuttings area width (ft.)

Cuttings area depth (ft.) Cuttings area volume (cu. yd.)

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

WCuttings area liner

Cuttings area liner specifications and installation description

Well Name: FEZ FEDERAL COM	Well Location: T25S / R35E / SEC 9 / SWSE / 32.138547 / -103.368908	County or Parish/State: LEA / NM
Well Number: 707H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM125658	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002546244	Well Status: Approved Application for Permit to Drill	Operator: COG OPERATING LLC

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: NO

Ancillary Facilities attachment:

Comments: GCP Attached.

Section 9 - Well Site Layout

Well Site Layout Diagram:

COG_Fez_707H_CTB_Flowlines_20190403152503.pdf

COG_Fez_707H_Layout_20190403152511.pdf

COG_Fez_707H_CTB_Layout_20190403152518.pdf

Comments: The Fez Federal 9P Central Tank Battery (CTB) is proposed in Section 9, T25S, R35E. Production from each of the 9 producing wells will be sent to the proposed Fez Federal 9P CTB. We plan to install 9 buried 4” FP 601HT production flowlines from each wellhead to the inlet manifold of the proposed CTB; the route for these flowlines will follow the “Mainline” route as shown in the attached plat. We will also install 1 buried 6” poly line for gas lift supply from the CTB to each production well pad; the route for this gas lift line will follow the “Mainline” route as shown in the attached plat. We will also install 1 buried 10” poly line for produced water transfer from the CTB to an existing pipeline connection in Section 16; this line will follow the “Mainline” route as shown in the attached plat.

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name: FEZ FEDERAL COM

Multiple Well Pad Number: 710H, 707H

Recontouring attachment:

COG_Fez_707H_Reclamation_20190403152532.pdf

Drainage/Erosion control construction: Immediately following construction straw waddles will be placed as necessary at the well site to reduce to reduce sediment impacts to fragile/sensitive soils.

Drainage/Erosion control reclamation: West 50'

Well pad proposed disturbance (acres): 3.67	Well pad interim reclamation (acres): 0.15	Well pad long term disturbance (acres): 3.35
Road proposed disturbance (acres): 0.13	Road interim reclamation (acres): 0.13	Road long term disturbance (acres): 0.13
Powerline proposed disturbance (acres): 0	Powerline interim reclamation (acres): 0	Powerline long term disturbance (acres): 0
Pipeline proposed disturbance (acres): 0.04	Pipeline interim reclamation (acres): 0.04	Pipeline long term disturbance (acres): 0.04
Other proposed disturbance (acres): 5.74	Other interim reclamation (acres): 5.74	Other long term disturbance (acres): 5.74
Total proposed disturbance: 9.58	Total interim reclamation: 6.06	Total long term disturbance: 9.26

Disturbance Comments:

Reconstruction method: New construction of pad.

Topsoil redistribution: West 50'

Soil treatment: None

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Well Name: FEZ FEDERAL COM

Well Location: T25S / R35E / SEC 9 / SWSE / 32.138547 / -103.368908

County or Parish/State: LEA / NM

Well Number: 707H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM125658

Unit or CA Name:

Unit or CA Number:

US Well Number: 3002546244

Well Status: Approved Application for Permit to Drill

Operator: COG OPERATING LLC

Existing Vegetation at the well pad: Shinnery Oak/Mesquite grassland

Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road: Shinnery Oak/Mesquite grassland

Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline: Shinnery Oak/Mesquite grassland

Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances: N/A

Existing Vegetation Community at other disturbances attachment:

Non native seed used? NO

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? NO

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? NO

Seed harvest description:

Seed harvest description attachment:

Seed Management

Seed Table

Seed Summary

Total pounds/Acre:

Seed Type

Pounds/Acre

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name:

Last Name:

Phone: (432)260-7399

Email: gherrera@concho.com

Seedbed prep:

Seed BMP:

Seed method:

Well Name: FEZ FEDERAL COM	Well Location: T25S / R35E / SEC 9 / SWSE / 32.138547 / -103.368908	County or Parish/State: LEA / NM
Well Number: 707H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM125658	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002546244	Well Status: Approved Application for Permit to Drill	Operator: COG OPERATING LLC

Existing invasive species? NO

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: N/A

Weed treatment plan attachment:

Monitoring plan description: N/A

Monitoring plan attachment:

Success standards: N/A

Pit closure description: N/A

Pit closure attachment:

COG_Fez_707H_Closed_Loop_20190403152543.pdf

Section 11 - Surface Ownership

Disturbance type: WELL PAD

Describe:

Surface Owner: PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: USFS Ranger District:

Well Name: FEZ FEDERAL COM	Well Location: T25S / R35E / SEC 9 / SWSE / 32.138547 / -103.368908	County or Parish/State: LEA / NM
Well Number: 707H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM125658	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002546244	Well Status: Approved Application for Permit to Drill	Operator: COG OPERATING LLC

Fee Owner: Quail Ranch (CONCHO)
Phone: (432)221-0342
Surface use plan certification: NO
Surface use plan certification document:
Surface access agreement or bond: Agreement
Surface Access Agreement Need description: Agreement signed on June 27th, 2016
Surface Access Bond BLM or Forest Service:
BLM Surface Access Bond number:
USFS Surface access bond number:

Fee Owner Address:
Email:

Section 12 - Other Information

Right of Way needed? NO
ROW Type(s):

Use APD as ROW?

ROW Applications

SUPO Additional Information: SUP attached.

Use a previously conducted onsite? YES

Previous Onsite information: Onsite completed on 10/09/2018 by Gerald Herrera (COG) and Jeff Robertson (BLM).

Other SUPO Attachment

- COG_Fez_707H_Layout_20190403152724.pdf
- COG_Fez_707H_CTB_Flowlines_20190403152657.pdf
- COG_Fez_707H_SUP_20190408153542.pdf
- COG_Fez_707H_Maps_Plats_20190408153457.pdf
- COG_Fez_707H_Fresh_H2O_20190403152645.pdf
- COG_Fez_707H_CTB_Layout_20190403152704.pdf
- COG_Fez_707H_Reclamation_20190403152744.pdf
- COG_Fez_707H_BrineH2O_20190403152635.pdf
- COG_Fez_707H_1Mile_Data_20190403152624.pdf
- COG_Fez_707H_C102_20190403152615.pdf
- COG_Fez_707H_Exisiting_Road_20190403152714.pdf

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Well Name: FEZ FEDERAL COM

Well Location: T25S / R35E / SEC 9 / SWSE / 32.138547 / -103.368908

County or Parish/State: LEA / NM

Well Number: 707H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM125658

Unit or CA Name:

Unit or CA Number:

US Well Number: 3002546244

Well Status: Approved Application for Permit to Drill

Operator: COG OPERATING LLC

PWD

Section 1 - General

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

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Lined pit Monitor description:

Lined pit Monitor attachment:

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

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Received by OCD: 2/10/2021 3:06:56 PM

Well Name: FEZ FEDERAL COM

Well Location: T25S / R35E / SEC 9 / SWSE / 32.138547 / -103.368908

County or Parish/State: LEA / NM

Well Number: 707H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM125658

Unit or CA Name:

Unit or CA Number:

US Well Number: 3002546244

Well Status: Approved Application for Permit to Drill

Operator: COG OPERATING LLC

Additional bond information attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD disturbance (acres): PWD surface owner:

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

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

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

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

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

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

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? NO

Received by OCD: 2/10/2021 3:06:56 PM

Well Name: FEZ FEDERAL COM

Well Location: T25S / R35E / SEC 9 / SWSE / 32.138547 / -103.368908

County or Parish/State: LEA / NM

Well Number: 707H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM125658

Unit or CA Name:

Unit or CA Number:

US Well Number: 3002546244

Well Status: Approved Application for Permit to Drill

Operator: COG OPERATING LLC

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number:

Injection well name:

Assigned injection well API number?

Injection well API number:

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 - Other

Would you like to utilize Other PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Other PWD discharge volume (bbl/day):

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

Operator Certification

Well Name: FEZ FEDERAL COM	Well Location: T25S / R35E / SEC 9 / SWSE / 32.138547 / -103.368908	County or Parish/State: LEA / NM
Well Number: 707H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM125658	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002546244	Well Status: Approved Application for Permit to Drill	Operator: COG OPERATING LLC

Operator Certification

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

NAME: MAYTE REYES

Signed on: 01/23/2021

Title: Regulatory Analyst

Street Address: 2208 West Main Street

City: ArtesiaState: NMZip: 88210

Phone: (575)748-6940

Email address: MREYES1@CONCHO.COM

Field Representative

Representative Name: Gerald Herrera

Street Address: 2208 West Main Street

City: ArtesiaState: NMZip: 88210

Phone: (575)748-6940

Email address: gherrera@concho.com

Well Name: FEZ FEDERAL COM	Well Location: T25S / R35E / SEC 9 / SWSE / 32.138547 / -103.368908	County or Parish/State: LEA / NM
Well Number: 707H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM125658	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002546244	Well Status: Approved Application for Permit to Drill	Operator: COG OPERATING LLC

Operator Certification

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a submission of Form 3160-5 or a Sundry Notice.

Operator Electronic Signature: REYES	Signed on: JAN 23, 2021 03:23 PM
Name: COG OPERATING LLC	
Title: Regulatory Analyst	
Street Address: ONE CONCHO CENTER 600 W ILLINOIS AVENUE	
City: MIDLAND	State: TX
Phone: (432) 685-9158	
Email address: NOT ENTERED	

Field Representative

Representative Name: Gerald Herrera		
Street Address: 2208 West Main Street		
City: Artesia	State: NM	Zip: 88210
Phone: (575)748-6940		
Email address: gherrera@concho.com		

BLM Point of Contact

BLM POC Name: JENNIFER SANCHEZ	BLM POC Title: Petroleum Engineer
BLM POC Phone: 5756270237	BLM POC Email Address: j1sanchez@blm.gov
Disposition: Approved	Disposition Date: 01/25/2021
Signature: Jennifer Sanchez	

DISTRICT I
1025 N. FRENCH DR., HOBBES, NM 88240
Phone: (575) 383-6161 Fax: (575) 383-0790

DISTRICT II
811 S. FIRST ST., ARTESIA, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III
1000 RIO BRAZOS RD., AZTEC, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505
Phone: (505) 476-3400 Fax: (505) 476-3452

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-46244	Pool Code 98098	Pool Name WC-025 G-09 S243532M;WOLFBONE
Property Code 322742	Property Name FEZ FEDERAL COM	Well Number 707H
GRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3238.2'

Surface Location

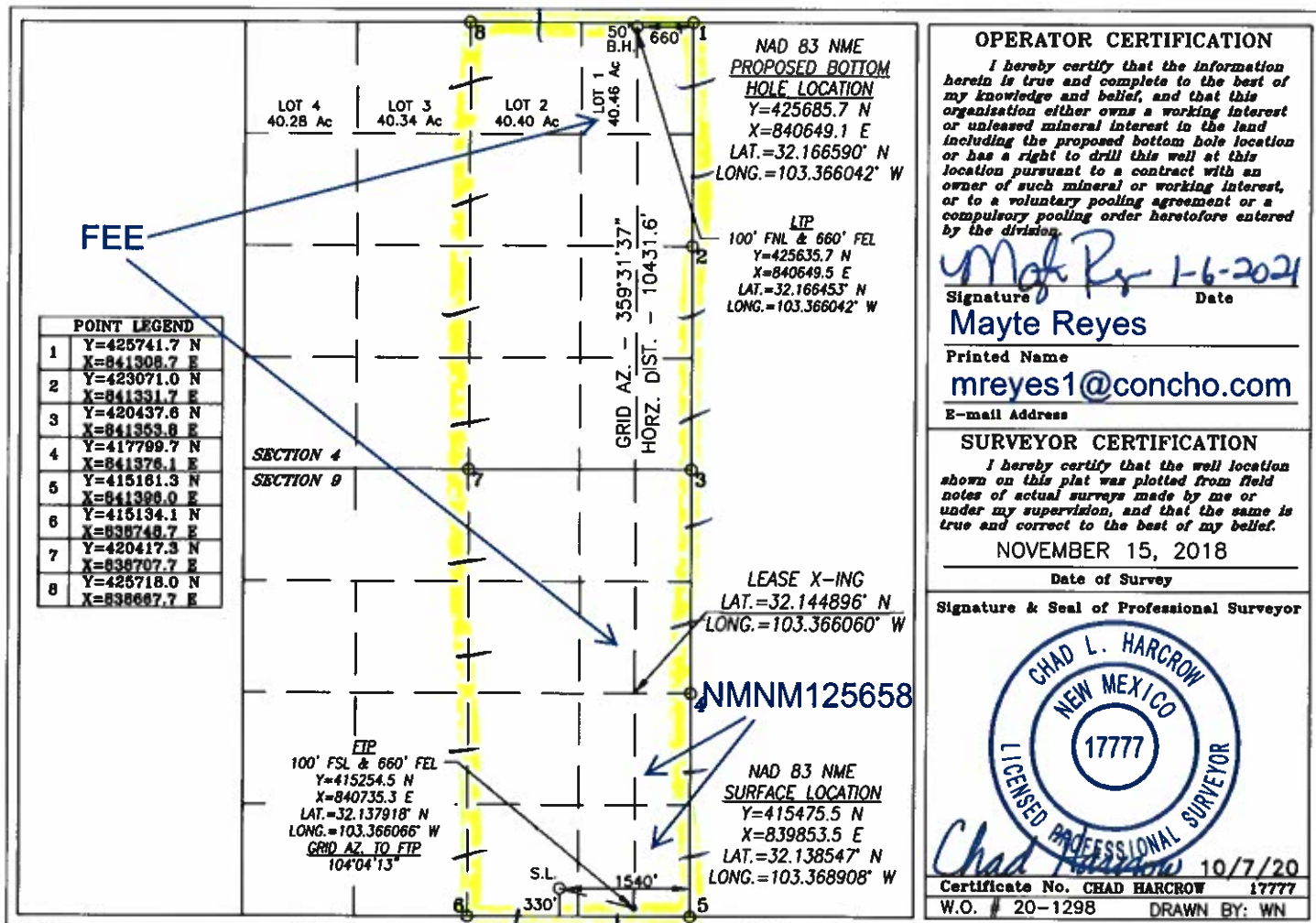
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	9	25-S	35-E		330	SOUTH	1540	EAST	LEA

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
1	4	25-S	35-E		50	NORTH	660	EAST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
641.64			

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



DELAWARE BASIN EAST

BULLDOG PROSPECT (NM-E)

FEZ FEDERAL PROJECT (BULLDOG 2535)

FEZ FEDERAL COM #707H

OWB

Plan: PWP1

Standard Survey Report

13 October, 2020

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well FEZ FEDERAL COM #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3268.2usft (TBD)
Site:	FEZ FEDERAL PROJECT (BULLDOG 2535)	MD Reference:	*KB=30' @ 3268.2usft (TBD)
Well:	FEZ FEDERAL COM #707H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	Database:	edm

Project	BULLDOG 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		

Site	FEZ FEDERAL PROJECT (BULLDOG 2535)		
Site Position:		Northing:	398,637.10 usft
From:	Map	Easting:	741,887.40 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 5' 36.820 N
		Longitude:	103° 33' 8.116 W
		Grid Convergence:	0.42 °

Well	FEZ FEDERAL COM #707H					
Well Position	+N/-S	0.0 usft	Northing:	415,417.20 usfl	Latitude:	32° 8' 18.314 N
	+E/-W	0.0 usft	Easting:	798,666.90 usfl	Longitude:	103° 22' 6.394 W
Position Uncertainty		3.0 usft	Wellhead Elevation:	usfl	Ground Level:	3,238.2 usfl

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	10/13/2020	6.52	59.88	47,535.07240700

Design	PWP1			
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	4.46

Survey Tool Program	Date	10/13/2020		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	22,527.6	PWP1 (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

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well FEZ FEDERAL COM #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3268.2usft (TBD)
Site:	FEZ FEDERAL PROJECT (BULLDOG 2535)	MD Reference:	*KB=30' @ 3268.2usft (TBD)
Well:	FEZ FEDERAL COM #707H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	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)	
1,000.0	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	
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	
Start Build 2.00										
2,600.0	2.00	107.14	2,600.0	-0.5	1.7	-0.4	2.00	2.00	0.00	
2,700.0	4.00	107.14	2,699.8	-2.1	6.7	-1.5	2.00	2.00	0.00	
2,773.4	5.47	107.14	2,773.0	-3.8	12.5	-2.9	2.00	2.00	0.00	
Start 8944.9 hold at 2773.4 MD										
2,800.0	5.47	107.14	2,799.5	-4.6	14.9	-3.4	0.00	0.00	0.00	
2,900.0	5.47	107.14	2,899.0	-7.4	24.0	-5.5	0.00	0.00	0.00	
3,000.0	5.47	107.14	2,998.6	-10.2	33.1	-7.6	0.00	0.00	0.00	
3,100.0	5.47	107.14	3,098.1	-13.0	42.2	-9.7	0.00	0.00	0.00	
3,200.0	5.47	107.14	3,197.6	-15.8	51.3	-11.8	0.00	0.00	0.00	
3,300.0	5.47	107.14	3,297.2	-18.6	60.4	-13.9	0.00	0.00	0.00	
3,400.0	5.47	107.14	3,396.7	-21.4	69.5	-16.0	0.00	0.00	0.00	
3,500.0	5.47	107.14	3,496.3	-24.2	78.6	-18.1	0.00	0.00	0.00	
3,600.0	5.47	107.14	3,595.8	-27.1	87.7	-20.1	0.00	0.00	0.00	
3,700.0	5.47	107.14	3,695.4	-29.9	96.8	-22.2	0.00	0.00	0.00	
3,800.0	5.47	107.14	3,794.9	-32.7	105.9	-24.3	0.00	0.00	0.00	
3,900.0	5.47	107.14	3,894.5	-35.5	115.0	-26.4	0.00	0.00	0.00	
4,000.0	5.47	107.14	3,994.0	-38.3	124.2	-28.5	0.00	0.00	0.00	
4,100.0	5.47	107.14	4,093.5	-41.1	133.3	-30.6	0.00	0.00	0.00	
4,200.0	5.47	107.14	4,193.1	-43.9	142.4	-32.7	0.00	0.00	0.00	
4,300.0	5.47	107.14	4,292.6	-46.7	151.5	-34.8	0.00	0.00	0.00	
4,400.0	5.47	107.14	4,392.2	-49.5	160.6	-36.9	0.00	0.00	0.00	
4,500.0	5.47	107.14	4,491.7	-52.3	169.7	-39.0	0.00	0.00	0.00	
4,600.0	5.47	107.14	4,591.3	-55.1	178.8	-41.1	0.00	0.00	0.00	
4,700.0	5.47	107.14	4,690.8	-57.9	187.9	-43.2	0.00	0.00	0.00	
4,800.0	5.47	107.14	4,790.4	-60.7	197.0	-45.2	0.00	0.00	0.00	
4,900.0	5.47	107.14	4,889.9	-63.6	206.1	-47.3	0.00	0.00	0.00	
5,000.0	5.47	107.14	4,989.5	-66.4	215.2	-49.4	0.00	0.00	0.00	

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well FEZ FEDERAL COM #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3268.2usft (TBD)
Site:	FEZ FEDERAL PROJECT (BULLDOG 2535)	MD Reference:	*KB=30' @ 3268.2usft (TBD)
Well:	FEZ FEDERAL COM #707H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	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)	
5,100.0	5.47	107.14	5,089.0	-69.2	224.3	-51.5	0.00	0.00	0.00	
5,200.0	5.47	107.14	5,188.5	-72.0	233.4	-53.6	0.00	0.00	0.00	
5,300.0	5.47	107.14	5,288.1	-74.8	242.5	-55.7	0.00	0.00	0.00	
5,400.0	5.47	107.14	5,387.6	-77.6	251.6	-57.8	0.00	0.00	0.00	
5,500.0	5.47	107.14	5,487.2	-80.4	260.7	-59.9	0.00	0.00	0.00	
5,600.0	5.47	107.14	5,586.7	-83.2	269.9	-62.0	0.00	0.00	0.00	
5,700.0	5.47	107.14	5,686.3	-86.0	279.0	-64.1	0.00	0.00	0.00	
5,800.0	5.47	107.14	5,785.8	-88.8	288.1	-66.2	0.00	0.00	0.00	
5,900.0	5.47	107.14	5,885.4	-91.6	297.2	-68.3	0.00	0.00	0.00	
6,000.0	5.47	107.14	5,984.9	-94.4	306.3	-70.3	0.00	0.00	0.00	
6,100.0	5.47	107.14	6,084.4	-97.2	315.4	-72.4	0.00	0.00	0.00	
6,200.0	5.47	107.14	6,184.0	-100.1	324.5	-74.5	0.00	0.00	0.00	
6,300.0	5.47	107.14	6,283.5	-102.9	333.6	-76.6	0.00	0.00	0.00	
6,400.0	5.47	107.14	6,383.1	-105.7	342.7	-78.7	0.00	0.00	0.00	
6,500.0	5.47	107.14	6,482.6	-108.5	351.8	-80.8	0.00	0.00	0.00	
6,600.0	5.47	107.14	6,582.2	-111.3	360.9	-82.9	0.00	0.00	0.00	
6,700.0	5.47	107.14	6,681.7	-114.1	370.0	-85.0	0.00	0.00	0.00	
6,800.0	5.47	107.14	6,781.3	-116.9	379.1	-87.1	0.00	0.00	0.00	
6,900.0	5.47	107.14	6,880.8	-119.7	388.2	-89.2	0.00	0.00	0.00	
7,000.0	5.47	107.14	6,980.4	-122.5	397.3	-91.3	0.00	0.00	0.00	
7,100.0	5.47	107.14	7,079.9	-125.3	406.4	-93.4	0.00	0.00	0.00	
7,200.0	5.47	107.14	7,179.4	-128.1	415.6	-95.4	0.00	0.00	0.00	
7,300.0	5.47	107.14	7,279.0	-130.9	424.7	-97.5	0.00	0.00	0.00	
7,400.0	5.47	107.14	7,378.5	-133.7	433.8	-99.6	0.00	0.00	0.00	
7,500.0	5.47	107.14	7,478.1	-136.6	442.9	-101.7	0.00	0.00	0.00	
7,600.0	5.47	107.14	7,577.6	-139.4	452.0	-103.8	0.00	0.00	0.00	
7,700.0	5.47	107.14	7,677.2	-142.2	461.1	-105.9	0.00	0.00	0.00	
7,800.0	5.47	107.14	7,776.7	-145.0	470.2	-108.0	0.00	0.00	0.00	
7,900.0	5.47	107.14	7,876.3	-147.8	479.3	-110.1	0.00	0.00	0.00	
8,000.0	5.47	107.14	7,975.8	-150.6	488.4	-112.2	0.00	0.00	0.00	
8,100.0	5.47	107.14	8,075.3	-153.4	497.5	-114.3	0.00	0.00	0.00	
8,200.0	5.47	107.14	8,174.9	-156.2	506.6	-116.4	0.00	0.00	0.00	
8,300.0	5.47	107.14	8,274.4	-159.0	515.7	-118.5	0.00	0.00	0.00	
8,400.0	5.47	107.14	8,374.0	-161.8	524.8	-120.5	0.00	0.00	0.00	
8,500.0	5.47	107.14	8,473.5	-164.6	533.9	-122.6	0.00	0.00	0.00	
8,600.0	5.47	107.14	8,573.1	-167.4	543.0	-124.7	0.00	0.00	0.00	
8,700.0	5.47	107.14	8,672.6	-170.3	552.1	-126.8	0.00	0.00	0.00	
8,800.0	5.47	107.14	8,772.2	-173.1	561.3	-128.9	0.00	0.00	0.00	
8,900.0	5.47	107.14	8,871.7	-175.9	570.4	-131.0	0.00	0.00	0.00	
9,000.0	5.47	107.14	8,971.2	-178.7	579.5	-133.1	0.00	0.00	0.00	
9,100.0	5.47	107.14	9,070.8	-181.5	588.6	-135.2	0.00	0.00	0.00	
9,200.0	5.47	107.14	9,170.3	-184.3	597.7	-137.3	0.00	0.00	0.00	
9,300.0	5.47	107.14	9,269.9	-187.1	606.8	-139.4	0.00	0.00	0.00	

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well FEZ FEDERAL COM #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3268.2usft (TBD)
Site:	FEZ FEDERAL PROJECT (BULLDOG 2535)	MD Reference:	*KB=30' @ 3268.2usft (TBD)
Well:	FEZ FEDERAL COM #707H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	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)
9,400.0	5.47	107.14	9,369.4	-189.9	615.9	-141.5	0.00	0.00	0.00
9,500.0	5.47	107.14	9,469.0	-192.7	625.0	-143.6	0.00	0.00	0.00
9,600.0	5.47	107.14	9,568.5	-195.5	634.1	-145.6	0.00	0.00	0.00
9,700.0	5.47	107.14	9,668.1	-198.3	643.2	-147.7	0.00	0.00	0.00
9,800.0	5.47	107.14	9,767.6	-201.1	652.3	-149.8	0.00	0.00	0.00
9,900.0	5.47	107.14	9,867.2	-203.9	661.4	-151.9	0.00	0.00	0.00
10,000.0	5.47	107.14	9,966.7	-206.8	670.5	-154.0	0.00	0.00	0.00
10,100.0	5.47	107.14	10,066.2	-209.6	679.6	-156.1	0.00	0.00	0.00
10,200.0	5.47	107.14	10,165.8	-212.4	688.7	-158.2	0.00	0.00	0.00
10,300.0	5.47	107.14	10,265.3	-215.2	697.8	-160.3	0.00	0.00	0.00
10,400.0	5.47	107.14	10,364.9	-218.0	707.0	-162.4	0.00	0.00	0.00
10,500.0	5.47	107.14	10,464.4	-220.8	716.1	-164.5	0.00	0.00	0.00
10,600.0	5.47	107.14	10,564.0	-223.6	725.2	-166.6	0.00	0.00	0.00
10,700.0	5.47	107.14	10,663.5	-226.4	734.3	-168.6	0.00	0.00	0.00
10,800.0	5.47	107.14	10,763.1	-229.2	743.4	-170.7	0.00	0.00	0.00
10,900.0	5.47	107.14	10,862.6	-232.0	752.5	-172.8	0.00	0.00	0.00
11,000.0	5.47	107.14	10,962.1	-234.8	761.6	-174.9	0.00	0.00	0.00
11,100.0	5.47	107.14	11,061.7	-237.6	770.7	-177.0	0.00	0.00	0.00
11,200.0	5.47	107.14	11,161.2	-240.4	779.8	-179.1	0.00	0.00	0.00
11,300.0	5.47	107.14	11,260.8	-243.3	788.9	-181.2	0.00	0.00	0.00
11,400.0	5.47	107.14	11,360.3	-246.1	798.0	-183.3	0.00	0.00	0.00
11,500.0	5.47	107.14	11,459.9	-248.9	807.1	-185.4	0.00	0.00	0.00
11,600.0	5.47	107.14	11,559.4	-251.7	816.2	-187.5	0.00	0.00	0.00
11,700.0	5.47	107.14	11,659.0	-254.5	825.3	-189.6	0.00	0.00	0.00
11,718.3	5.47	107.14	11,677.2	-255.0	827.0	-189.9	0.00	0.00	0.00
Start DLS 10.00 TFO -107.42									
11,800.0	8.35	38.12	11,758.4	-251.5	834.4	-185.9	10.00	3.53	-84.50
11,900.0	17.31	16.68	11,855.9	-231.5	843.2	-165.2	10.00	8.96	-21.44
12,000.0	27.00	9.96	11,948.4	-194.8	851.4	-128.0	10.00	9.69	-6.71
12,100.0	36.85	6.64	12,033.2	-142.5	858.8	-75.3	10.00	9.85	-3.32
12,200.0	46.75	4.57	12,107.6	-76.2	865.2	-8.8	10.00	9.91	-2.07
12,300.0	56.68	3.08	12,169.5	2.0	870.3	69.6	10.00	9.93	-1.49
12,400.0	66.63	1.90	12,216.9	89.8	874.1	157.5	10.00	9.95	-1.18
12,500.0	76.58	0.89	12,248.4	184.5	876.4	252.1	10.00	9.95	-1.01
12,600.0	86.54	359.96	12,263.1	283.3	877.1	350.7	10.00	9.96	-0.93
12,646.4	91.17	359.53	12,264.0	329.8	876.9	396.9	10.00	9.96	-0.91
Start 2949.8 hold at 12646.4 MD									
12,700.0	91.17	359.53	12,262.9	383.3	876.5	450.3	0.00	0.00	0.00
12,800.0	91.17	359.53	12,260.9	483.3	875.7	549.9	0.00	0.00	0.00
12,900.0	91.17	359.53	12,258.9	583.2	874.9	649.5	0.00	0.00	0.00
13,000.0	91.17	359.53	12,256.8	683.2	874.0	749.1	0.00	0.00	0.00
13,100.0	91.17	359.53	12,254.8	783.2	873.2	848.7	0.00	0.00	0.00
13,200.0	91.17	359.53	12,252.8	883.2	872.4	948.3	0.00	0.00	0.00
13,300.0	91.17	359.53	12,250.7	983.2	871.6	1,047.9	0.00	0.00	0.00

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well FEZ FEDERAL COM #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3268.2usft (TBD)
Site:	FEZ FEDERAL PROJECT (BULLDOG 2535)	MD Reference:	*KB=30' @ 3268.2usft (TBD)
Well:	FEZ FEDERAL COM #707H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	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)
13,400.0	91.17	359.53	12,248.7	1,083.1	870.8	1,147.5	0.00	0.00	0.00
13,500.0	91.17	359.53	12,246.6	1,183.1	870.0	1,247.1	0.00	0.00	0.00
13,600.0	91.17	359.53	12,244.6	1,283.1	869.2	1,346.8	0.00	0.00	0.00
13,700.0	91.17	359.53	12,242.6	1,383.1	868.4	1,446.4	0.00	0.00	0.00
13,800.0	91.17	359.53	12,240.5	1,483.0	867.5	1,546.0	0.00	0.00	0.00
13,900.0	91.17	359.53	12,238.5	1,583.0	866.7	1,645.6	0.00	0.00	0.00
14,000.0	91.17	359.53	12,236.5	1,683.0	865.9	1,745.2	0.00	0.00	0.00
14,100.0	91.17	359.53	12,234.4	1,783.0	865.1	1,844.8	0.00	0.00	0.00
14,200.0	91.17	359.53	12,232.4	1,882.9	864.3	1,944.4	0.00	0.00	0.00
14,300.0	91.17	359.53	12,230.4	1,982.9	863.5	2,044.0	0.00	0.00	0.00
14,400.0	91.17	359.53	12,228.3	2,082.9	862.7	2,143.6	0.00	0.00	0.00
14,500.0	91.17	359.53	12,226.3	2,182.9	861.9	2,243.2	0.00	0.00	0.00
14,600.0	91.17	359.53	12,224.3	2,282.8	861.0	2,342.9	0.00	0.00	0.00
14,700.0	91.17	359.53	12,222.2	2,382.8	860.2	2,442.5	0.00	0.00	0.00
14,800.0	91.17	359.53	12,220.2	2,482.8	859.4	2,542.1	0.00	0.00	0.00
14,900.0	91.17	359.53	12,218.2	2,582.8	858.6	2,641.7	0.00	0.00	0.00
15,000.0	91.17	359.53	12,216.1	2,682.7	857.8	2,741.3	0.00	0.00	0.00
15,100.0	91.17	359.53	12,214.1	2,782.7	857.0	2,840.9	0.00	0.00	0.00
15,200.0	91.17	359.53	12,212.1	2,882.7	856.2	2,940.5	0.00	0.00	0.00
15,300.0	91.17	359.53	12,210.0	2,982.7	855.4	3,040.1	0.00	0.00	0.00
15,400.0	91.17	359.53	12,208.0	3,082.6	854.5	3,139.7	0.00	0.00	0.00
15,500.0	91.17	359.53	12,206.0	3,182.6	853.7	3,239.4	0.00	0.00	0.00
15,596.3	91.17	359.53	12,204.0	3,278.9	852.9	3,335.3	0.00	0.00	0.00
Start DLS 2.00 TFO -179.56									
15,600.0	91.09	359.53	12,203.9	3,282.6	852.9	3,339.0	2.00	-2.00	-0.02
15,650.9	90.07	359.53	12,203.4	3,333.5	852.5	3,389.7	2.00	-2.00	-0.02
Start 3445.4 hold at 15650.9 MD									
15,700.0	90.07	359.53	12,203.3	3,382.6	852.1	3,438.6	0.00	0.00	0.00
15,800.0	90.07	359.53	12,203.2	3,482.6	851.3	3,538.2	0.00	0.00	0.00
15,900.0	90.07	359.53	12,203.1	3,582.6	850.4	3,637.9	0.00	0.00	0.00
16,000.0	90.07	359.53	12,203.0	3,682.6	849.6	3,737.5	0.00	0.00	0.00
16,100.0	90.07	359.53	12,202.8	3,782.6	848.8	3,837.1	0.00	0.00	0.00
16,200.0	90.07	359.53	12,202.7	3,882.6	848.0	3,936.7	0.00	0.00	0.00
16,300.0	90.07	359.53	12,202.6	3,982.6	847.1	4,036.4	0.00	0.00	0.00
16,400.0	90.07	359.53	12,202.5	4,082.6	846.3	4,136.0	0.00	0.00	0.00
16,500.0	90.07	359.53	12,202.3	4,182.6	845.5	4,235.6	0.00	0.00	0.00
16,600.0	90.07	359.53	12,202.2	4,282.6	844.6	4,335.3	0.00	0.00	0.00
16,700.0	90.07	359.53	12,202.1	4,382.6	843.8	4,434.9	0.00	0.00	0.00
16,800.0	90.07	359.53	12,201.9	4,482.6	843.0	4,534.5	0.00	0.00	0.00
16,900.0	90.07	359.53	12,201.8	4,582.6	842.2	4,634.1	0.00	0.00	0.00
17,000.0	90.07	359.53	12,201.7	4,682.5	841.3	4,733.8	0.00	0.00	0.00
17,100.0	90.07	359.53	12,201.6	4,782.5	840.5	4,833.4	0.00	0.00	0.00
17,200.0	90.07	359.53	12,201.4	4,882.5	839.7	4,933.0	0.00	0.00	0.00
17,300.0	90.07	359.53	12,201.3	4,982.5	838.9	5,032.7	0.00	0.00	0.00

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well FEZ FEDERAL COM #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3268.2usft (TBD)
Site:	FEZ FEDERAL PROJECT (BULLDOG 2535)	MD Reference:	*KB=30' @ 3268.2usft (TBD)
Well:	FEZ FEDERAL COM #707H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	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)
17,400.0	90.07	359.53	12,201.2	5,082.5	838.0	5,132.3	0.00	0.00	0.00
17,500.0	90.07	359.53	12,201.0	5,182.5	837.2	5,231.9	0.00	0.00	0.00
17,600.0	90.07	359.53	12,200.9	5,282.5	836.4	5,331.6	0.00	0.00	0.00
17,700.0	90.07	359.53	12,200.8	5,382.5	835.5	5,431.2	0.00	0.00	0.00
17,800.0	90.07	359.53	12,200.7	5,482.5	834.7	5,530.8	0.00	0.00	0.00
17,900.0	90.07	359.53	12,200.5	5,582.5	833.9	5,630.4	0.00	0.00	0.00
18,000.0	90.07	359.53	12,200.4	5,682.5	833.1	5,730.1	0.00	0.00	0.00
18,100.0	90.07	359.53	12,200.3	5,782.5	832.2	5,829.7	0.00	0.00	0.00
18,200.0	90.07	359.53	12,200.1	5,882.5	831.4	5,929.3	0.00	0.00	0.00
18,300.0	90.07	359.53	12,200.0	5,982.5	830.6	6,029.0	0.00	0.00	0.00
18,400.0	90.07	359.53	12,199.9	6,082.5	829.8	6,128.6	0.00	0.00	0.00
18,500.0	90.07	359.53	12,199.8	6,182.5	828.9	6,228.2	0.00	0.00	0.00
18,600.0	90.07	359.53	12,199.6	6,282.5	828.1	6,327.9	0.00	0.00	0.00
18,700.0	90.07	359.53	12,199.5	6,382.5	827.3	6,427.5	0.00	0.00	0.00
18,800.0	90.07	359.53	12,199.4	6,482.5	826.5	6,527.1	0.00	0.00	0.00
18,900.0	90.07	359.53	12,199.3	6,582.5	825.6	6,626.7	0.00	0.00	0.00
19,000.0	90.07	359.53	12,199.1	6,682.5	824.8	6,726.4	0.00	0.00	0.00
19,096.3	90.07	359.53	12,199.0	6,778.8	824.0	6,822.3	0.00	0.00	0.00
Start DLS 2.00 TFO 178.49									
19,100.0	90.00	359.53	12,199.0	6,782.5	824.0	6,826.0	2.00	-2.00	0.05
19,108.3	89.83	359.53	12,199.0	6,790.8	823.9	6,834.3	2.00	-2.00	0.05
Start 3419.2 hold at 19108.3 MD									
19,200.0	89.83	359.53	12,199.3	6,882.5	823.2	6,925.6	0.00	0.00	0.00
19,300.0	89.83	359.53	12,199.6	6,982.5	822.3	7,025.3	0.00	0.00	0.00
19,400.0	89.83	359.53	12,199.9	7,082.5	821.5	7,124.9	0.00	0.00	0.00
19,500.0	89.83	359.53	12,200.2	7,182.5	820.7	7,224.5	0.00	0.00	0.00
19,600.0	89.83	359.53	12,200.4	7,282.5	819.9	7,324.2	0.00	0.00	0.00
19,700.0	89.83	359.53	12,200.7	7,382.5	819.1	7,423.8	0.00	0.00	0.00
19,800.0	89.83	359.53	12,201.0	7,482.4	818.3	7,523.4	0.00	0.00	0.00
19,900.0	89.83	359.53	12,201.3	7,582.4	817.4	7,623.0	0.00	0.00	0.00
20,000.0	89.83	359.53	12,201.6	7,682.4	816.6	7,722.7	0.00	0.00	0.00
20,100.0	89.83	359.53	12,201.9	7,782.4	815.8	7,822.3	0.00	0.00	0.00
20,200.0	89.83	359.53	12,202.2	7,882.4	815.0	7,921.9	0.00	0.00	0.00
20,300.0	89.83	359.53	12,202.5	7,982.4	814.2	8,021.6	0.00	0.00	0.00
20,400.0	89.83	359.53	12,202.8	8,082.4	813.4	8,121.2	0.00	0.00	0.00
20,500.0	89.83	359.53	12,203.1	8,182.4	812.5	8,220.8	0.00	0.00	0.00
20,600.0	89.83	359.53	12,203.4	8,282.4	811.7	8,320.5	0.00	0.00	0.00
20,700.0	89.83	359.53	12,203.7	8,382.4	810.9	8,420.1	0.00	0.00	0.00
20,800.0	89.83	359.53	12,204.0	8,482.4	810.1	8,519.7	0.00	0.00	0.00
20,900.0	89.83	359.53	12,204.2	8,582.4	809.3	8,619.3	0.00	0.00	0.00
21,000.0	89.83	359.53	12,204.5	8,682.4	808.5	8,719.0	0.00	0.00	0.00
21,100.0	89.83	359.53	12,204.8	8,782.4	807.6	8,818.6	0.00	0.00	0.00
21,200.0	89.83	359.53	12,205.1	8,882.4	806.8	8,918.2	0.00	0.00	0.00

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well FEZ FEDERAL COM #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3268.2usft (TBD)
Site:	FEZ FEDERAL PROJECT (BULLDOG 2535)	MD Reference:	*KB=30' @ 3268.2usft (TBD)
Well:	FEZ FEDERAL COM #707H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	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)
21,300.0	89.83	359.53	12,205.4	8,982.4	806.0	9,017.9	0.00	0.00	0.00
21,400.0	89.83	359.53	12,205.7	9,082.4	805.2	9,117.5	0.00	0.00	0.00
21,500.0	89.83	359.53	12,206.0	9,182.4	804.4	9,217.1	0.00	0.00	0.00
21,600.0	89.83	359.53	12,206.3	9,282.4	803.6	9,316.8	0.00	0.00	0.00
21,700.0	89.83	359.53	12,206.6	9,382.4	802.8	9,416.4	0.00	0.00	0.00
21,800.0	89.83	359.53	12,206.9	9,482.4	801.9	9,516.0	0.00	0.00	0.00
21,900.0	89.83	359.53	12,207.2	9,582.4	801.1	9,615.6	0.00	0.00	0.00
22,000.0	89.83	359.53	12,207.5	9,682.4	800.3	9,715.3	0.00	0.00	0.00
22,100.0	89.83	359.53	12,207.8	9,782.4	799.5	9,814.9	0.00	0.00	0.00
22,200.0	89.83	359.53	12,208.0	9,882.4	798.7	9,914.5	0.00	0.00	0.00
22,300.0	89.83	359.53	12,208.3	9,982.4	797.9	10,014.2	0.00	0.00	0.00
22,400.0	89.83	359.53	12,208.6	10,082.4	797.0	10,113.8	0.00	0.00	0.00
22,500.0	89.83	359.53	12,208.9	10,182.3	796.2	10,213.4	0.00	0.00	0.00
22,527.6	89.83	359.53	12,209.0	10,209.9	796.0	10,240.9	0.00	0.00	0.00
TD at 22527.6									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
7000' F/FTP (FEZ FEI - hit/miss target - Shape - Rectangle (sides W100.0 H3,500.0 D20.0)	0.07	179.53	12,199.0	6,778.8	824.0	422,195.96	799,490.90	32° 9' 25.318 N	103° 21' 56.103 W
3500' F/FTP (FEZ FEI - plan hits target center - Rectangle (sides W100.0 H3,550.0 D20.0)	1.17	179.53	12,204.0	3,278.9	852.9	418,696.08	799,519.84	32° 8' 50.683 N	103° 21' 56.132 W
PBHL (FEZ FED COM - plan hits target center - Rectangle (sides W100.0 H3,426.0 D20.0)	-0.17	179.53	12,209.0	10,209.9	796.0	425,627.10	799,462.90	32° 9' 59.271 N	103° 21' 56.070 W
LTP (FEZ FED COM - plan misses target center by 0.1usft at 22477.6usft MD (12208.9 TVD, 10159.9 N, 796.4 E) - Point	0.00	0.00	12,209.0	10,159.9	796.4	425,577.10	799,463.30	32° 9' 58.777 N	103° 21' 56.071 W
FTP (FEZ FED COM - plan misses target center by 213.7usft at 12200.0usft MD (12107.6 TVD, -76.2 N, 865.2 E) - Circle (radius 50.0)	0.00	0.00	12,264.0	-221.0	881.7	415,196.20	799,548.60	32° 8' 16.049 N	103° 21' 56.164 W

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well FEZ FEDERAL COM #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3268.2usft (TBD)
Site:	FEZ FEDERAL PROJECT (BULLDOG 2535)	MD Reference:	*KB=30' @ 3268.2usft (TBD)
Well:	FEZ FEDERAL COM #707H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	Database:	edm

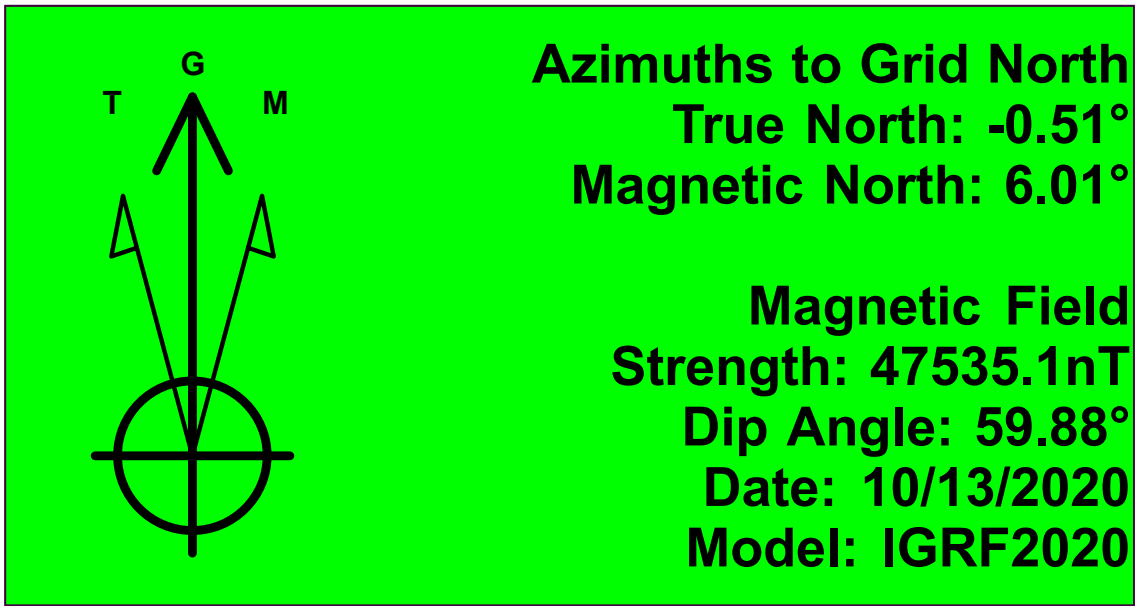
Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		
		+N/-S (usft)	+E/-W (usft)	Comment
2500	2500	0	0	Start Build 2.00
2773	2773	-4	12	Start 8944.9 hold at 2773.4 MD
11,718	11,677	-255	827	Start DLS 10.00 TFO -107.42
12,646	12,264	330	877	Start 2949.8 hold at 12646.4 MD
15,596	12,204	3279	853	Start DLS 2.00 TFO -179.56
15,651	12,203	3333	852	Start 3445.4 hold at 15650.9 MD
19,096	12,199	6779	824	Start DLS 2.00 TFO 178.49
19,108	12,199	6791	824	Start 3419.2 hold at 19108.3 MD
22,528	12,209	10,210	796	TD at 22527.6

Checked By: _____ Approved By: _____ Date: _____

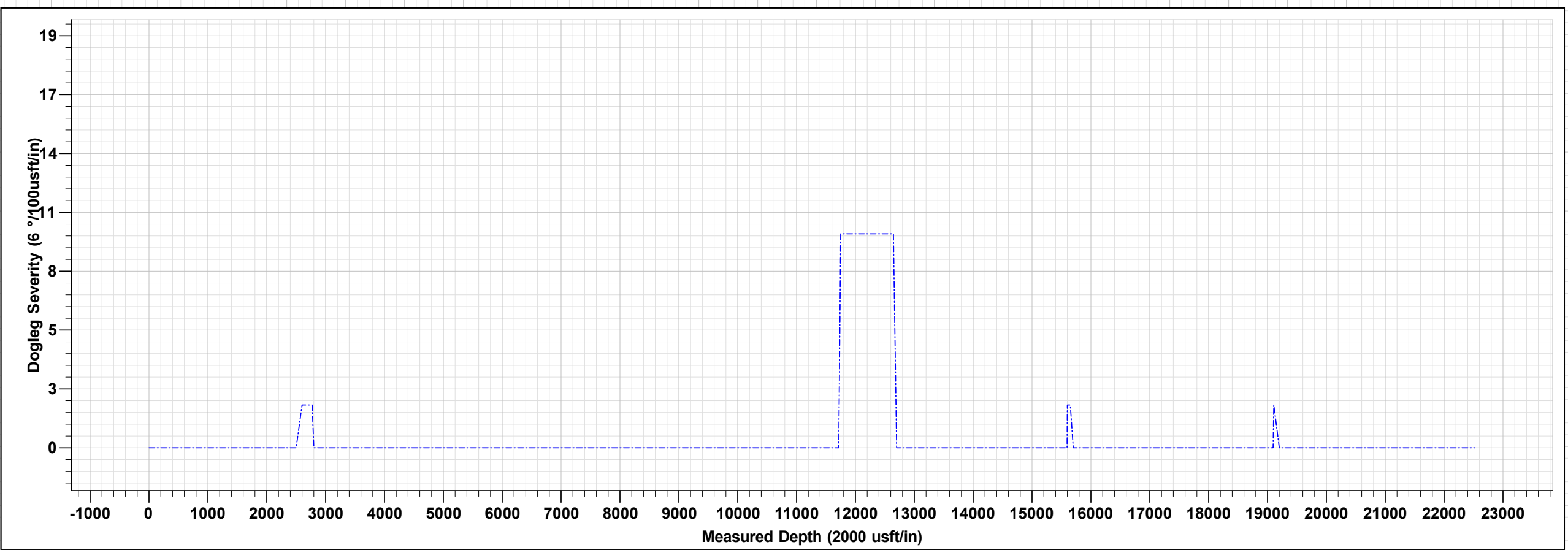
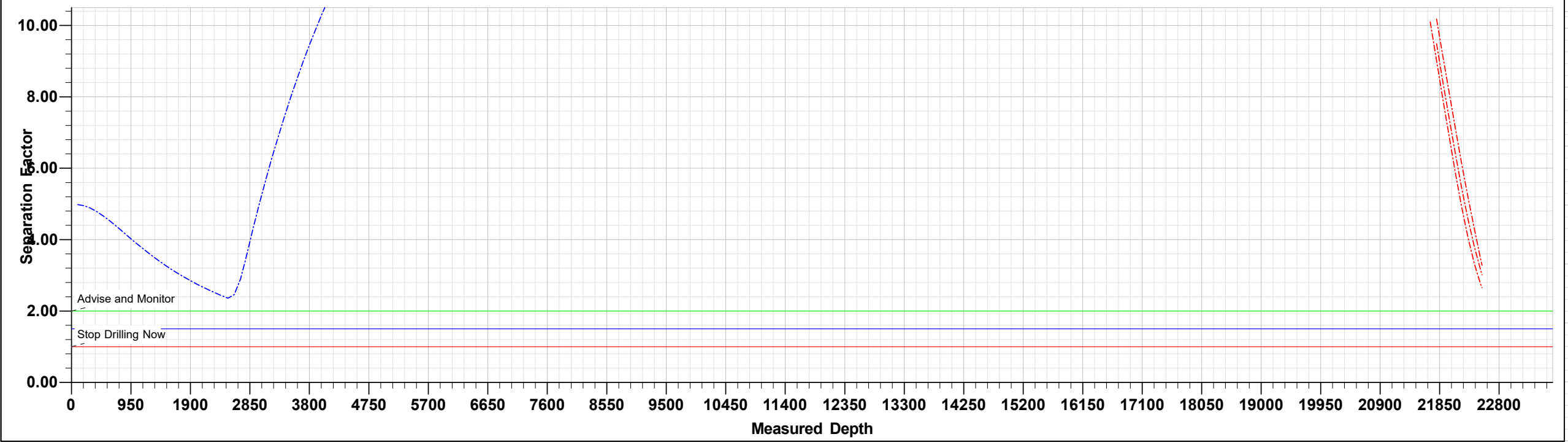


Project: BULLDOG PROSPECT (NM-E)
Site: FEZ FEDERAL PROJECT (BULLDOG 2535)
Well: FEZ FEDERAL COM #707H
Wellbore: OWB
Design: PWP1
GL: 3238.2
*KB=30' @ 3268.2usft (TBD)

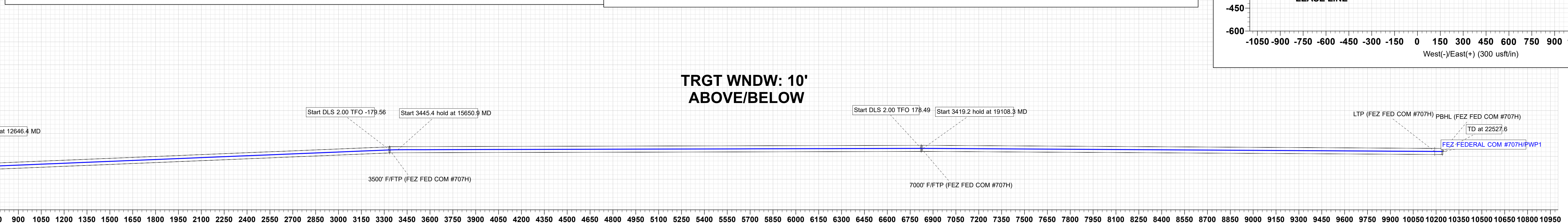
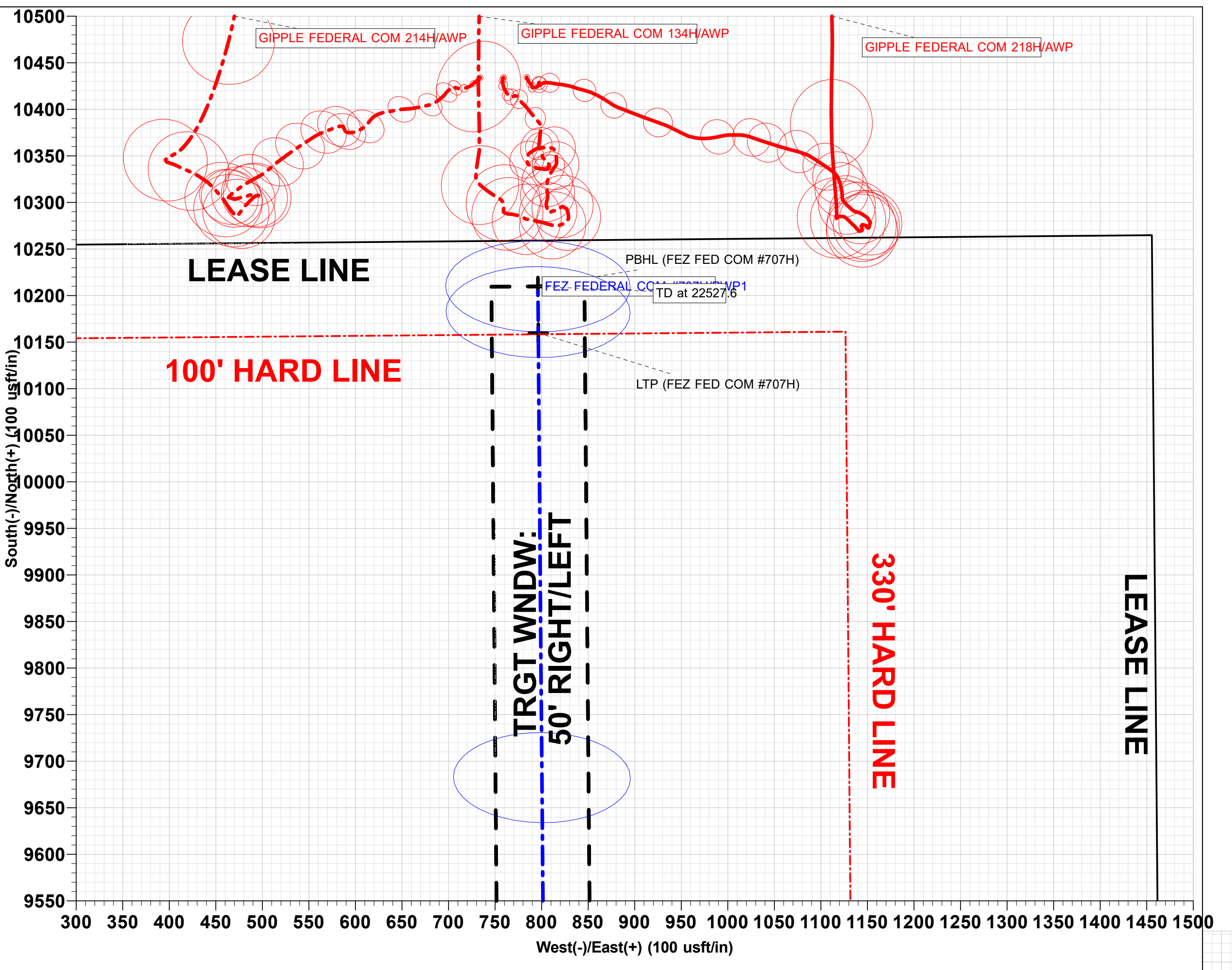
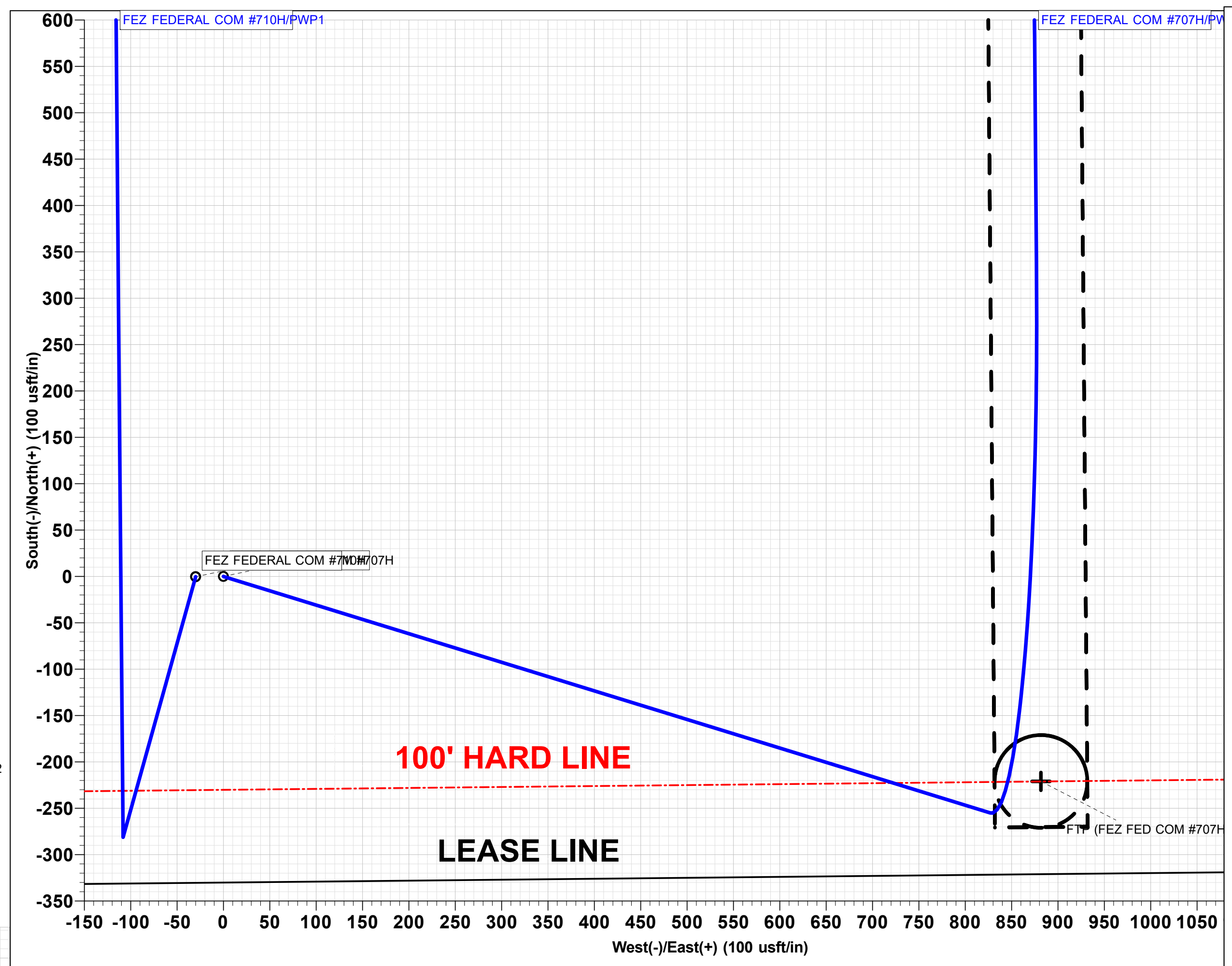
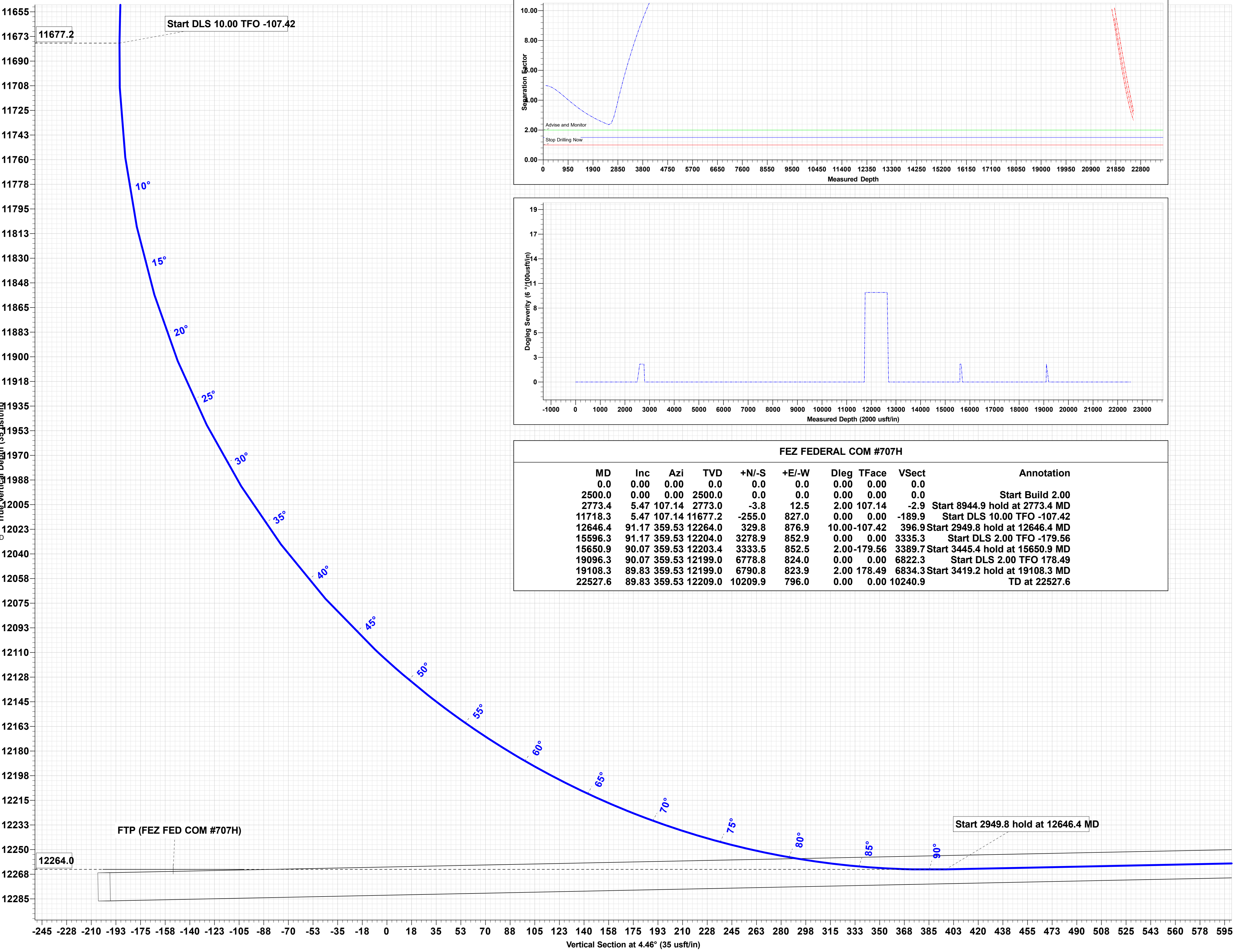
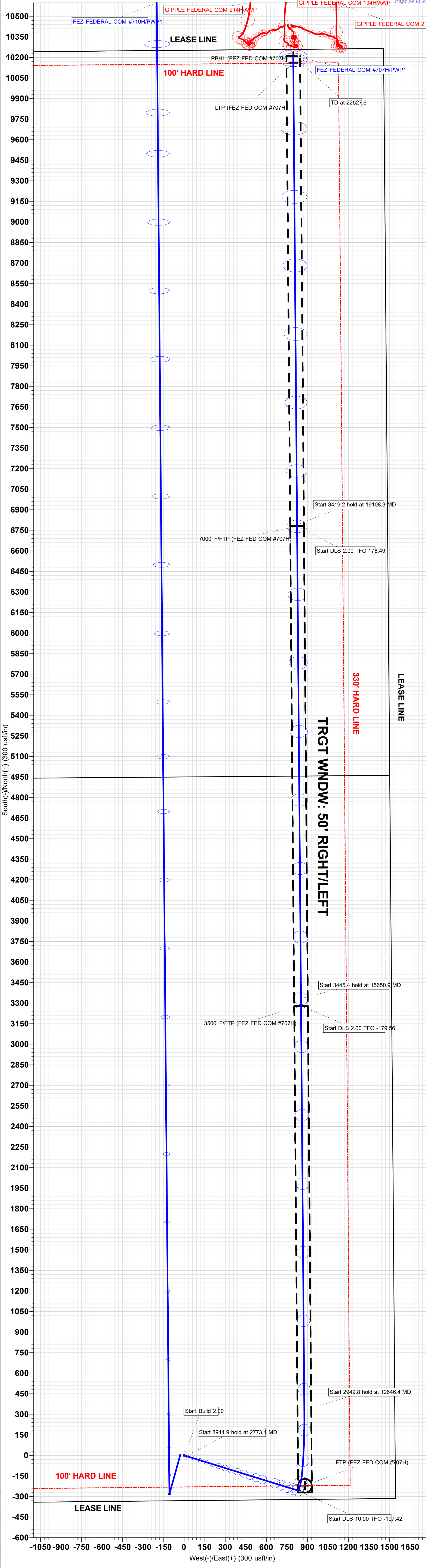


WELL DETAILS: FEZ FEDERAL COM #707H					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	415417.20	798666.90	32° 8' 18.314 N	103° 22' 6.394 W

DESIGN TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude
7000' F/FTP (FEZ FED COM #707H)	12199.0	6778.8	824.0	422195.96	799490.90	32° 9' 25.318 N
3500' F/FTP (FEZ FED COM #707H)	12204.0	3278.9	852.9	418696.08	799519.85	32° 8' 50.683 N
LTP (FEZ FED COM #707H)	12209.0	10159.9	796.4	425577.10	799463.30	32° 9' 58.777 N
PBHL (FEZ FED COM #707H)	12209.0	10209.9	796.0	425627.10	799462.90	32° 9' 59.271 N
FTP (FEZ FED COM #707H)	12264.0	-221.0	881.7	415196.20	799548.60	32° 8' 16.049 N



FEZ FEDERAL COM #707H									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	Start Build 2.00
2500.0	0.00	0.00	2500.0	0.0	0.0	0.00	0.00	0.0	Start 8944.9 hold at 2773.4 MD
2773.4	5.47	107.14	2773.0	-3.8	12.5	2.00	107.14	-2.9	Start DLS 10.00 TFO -107.42
1718.3	5.47	107.14	11677.2	-255.0	827.0	0.00	0.00	-189.9	Start DLS 2.00 TFO -179.56
12646.4	91.17	359.53	12264.0	328.8	876.9	10.00	-107.42	396.9	Start 2949.8 hold at 12646.4 MD
15596.3	91.17	359.53	12204.0	3278.9	852.9	0.00	0.00	3335.3	Start DLS 2.00 TFO -179.56
15650.9	90.07	359.53	12203.4	3333.5	852.5	2.00	-179.56	3389.7	Start 3445.4 hold at 15650.9 MD
19096.3	90.07	359.53	12199.0	6778.8	824.0	0.00	0.00	6822.3	Start DLS 2.00 TFO -178.49
19108.3	89.83	359.53	12199.0	6790.8	823.9	2.00	178.49	6834.3	Start 3419.2 hold at 19108.3 MD
22527.6	89.83	359.53	12209.0	10209.9	796.0	0.00	0.00	10240.9	TD at 22527.6



TRGT WNDW: 10'
ABOVE/BELOW

DELAWARE BASIN EAST

BULLDOG PROSPECT (NM-E)

FEZ FEDERAL PROJECT (BULLDOG 2535)

FEZ FEDERAL COM #707H

OWB

PWP1

Anticollision Report

13 October, 2020

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well FEZ FEDERAL COM #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3268.2usft (TBD)
Reference Site:	FEZ FEDERAL PROJECT (BULLDOG 2535)	MD Reference:	*KB=30' @ 3268.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	FEZ FEDERAL COM #707H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Reference	PWP1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum ellipse separation of 1,000.0 usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	10/13/2020		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	22,527.6	PWP1 (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						
FEZ FEDERAL PROJECT (BULLDOG 2535)						
FEZ FEDERAL COM #710H - OWB - PWP1	2,416.5	2,417.0	29.9	17.5	2.418	CC
FEZ FEDERAL COM #710H - OWB - PWP1	2,500.0	2,500.5	29.9	17.2	2.358	ES, SF
GIPPLE FEDERAL COM 134H - OWB - AWP	22,527.6	12,067.6	347.9	241.9	3.282	CC, ES, SF
GIPPLE FEDERAL COM 214H - OWB - AWP	22,527.6	12,234.0	409.9	273.9	3.014	CC, ES, SF
GIPPLE FEDERAL COM 218H - OWB - AWP	22,527.6	12,195.9	362.1	225.5	2.652	CC, ES, SF

Offset Design	FEZ FEDERAL PROJECT (BULLDOG 2535) - FEZ FEDERAL COM #710H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program:	0-Standard Keeper 104, 11892-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Separation Factor		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		
0.0	0.0	0.5	0.5	3.0	3.0	-90.57	-0.3	-29.9	29.9					
100.0	100.0	100.5	100.5	3.0	3.0	-90.57	-0.3	-29.9	29.9	23.9	6.00	4.981		
200.0	200.0	200.5	200.5	3.0	3.0	-90.57	-0.3	-29.9	29.9	23.9	6.04	4.950		
300.0	300.0	300.5	300.5	3.1	3.0	-90.57	-0.3	-29.9	29.9	23.8	6.12	4.885		
400.0	400.0	400.5	400.5	3.2	3.0	-90.57	-0.3	-29.9	29.9	23.7	6.24	4.791		
500.0	500.0	500.5	500.5	3.4	3.1	-90.57	-0.3	-29.9	29.9	23.5	6.40	4.675		
600.0	600.0	600.5	600.5	3.6	3.1	-90.57	-0.3	-29.9	29.9	23.3	6.58	4.542		
700.0	700.0	700.5	700.5	3.8	3.1	-90.57	-0.3	-29.9	29.9	23.1	6.80	4.398		
800.0	800.0	800.5	800.5	4.0	3.2	-90.57	-0.3	-29.9	29.9	22.9	7.04	4.250		
900.0	900.0	900.5	900.5	4.2	3.2	-90.57	-0.3	-29.9	29.9	22.6	7.29	4.099		
1,000.0	1,000.0	1,000.5	1,000.5	4.5	3.2	-90.57	-0.3	-29.9	29.9	22.3	7.57	3.951		
1,100.0	1,100.0	1,100.5	1,100.5	4.8	3.3	-90.57	-0.3	-29.9	29.9	22.0	7.86	3.806		
1,200.0	1,200.0	1,200.5	1,200.5	5.1	3.4	-90.57	-0.3	-29.9	29.9	21.7	8.16	3.665		
1,300.0	1,300.0	1,300.5	1,300.5	5.3	3.4	-90.57	-0.3	-29.9	29.9	21.4	8.47	3.531		
1,400.0	1,400.0	1,400.5	1,400.5	5.6	3.5	-90.57	-0.3	-29.9	29.9	21.1	8.79	3.402		
1,500.0	1,500.0	1,500.5	1,500.5	6.0	3.5	-90.57	-0.3	-29.9	29.9	20.8	9.12	3.279		
1,600.0	1,600.0	1,600.5	1,600.5	6.3	3.6	-90.57	-0.3	-29.9	29.9	20.4	9.45	3.163		
1,700.0	1,700.0	1,700.5	1,700.5	6.6	3.7	-90.57	-0.3	-29.9	29.9	20.1	9.79	3.053		
1,800.0	1,800.0	1,800.5	1,800.5	6.9	3.8	-90.57	-0.3	-29.9	29.9	19.8	10.14	2.949		
1,900.0	1,900.0	1,900.5	1,900.5	7.2	3.9	-90.57	-0.3	-29.9	29.9	19.4	10.49	2.850		
2,000.0	2,000.0	2,000.5	2,000.5	7.6	3.9	-90.57	-0.3	-29.9	29.9	19.1	10.85	2.756		
2,100.0	2,100.0	2,100.5	2,100.5	7.9	4.0	-90.57	-0.3	-29.9	29.9	18.7	11.21	2.668		

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 EAST	Local Co-ordinate Reference:	Well FEZ FEDERAL COM #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3268.2usft (TBD)
Reference Site:	FEZ FEDERAL PROJECT (BULLDOG 2535)	MD Reference:	*KB=30' @ 3268.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	FEZ FEDERAL COM #707H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-Standard Keeper 104, 11892-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 Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,200.0	2,200.0	2,200.5	2,200.5	8.2	4.1	-90.57	-0.3	-29.9	29.9	18.3	11.57	2.584	
2,300.0	2,300.0	2,300.5	2,300.5	8.6	4.2	-90.57	-0.3	-29.9	29.9	18.0	11.94	2.505	
2,400.0	2,400.0	2,400.5	2,400.5	8.9	4.3	-90.57	-0.3	-29.9	29.9	17.6	12.31	2.430	
2,416.5	2,416.5	2,417.0	2,417.0	8.9	4.3	-90.57	-0.3	-29.9	29.9	17.5	12.37	2.418 CC	
2,500.0	2,500.0	2,500.5	2,500.5	9.2	4.4	-90.57	-0.3	-29.9	29.9	17.2	12.68	2.358 ES, SF	
2,600.0	2,600.0	2,600.0	2,600.0	9.6	4.4	160.22	-2.0	-30.4	32.1	19.0	13.04	2.459	
2,700.0	2,699.8	2,699.4	2,699.3	9.9	4.4	155.46	-7.0	-31.8	38.8	25.4	13.41	2.891	
2,773.4	2,773.0	2,772.4	2,772.1	10.1	4.4	152.67	-11.9	-33.1	46.3	32.6	13.68	3.386	
2,800.0	2,799.5	2,798.8	2,798.4	10.2	4.4	152.08	-13.7	-33.6	49.4	35.6	13.77	3.585	
2,900.0	2,899.0	2,898.2	2,897.5	10.5	4.3	150.39	-20.3	-35.5	60.9	46.8	14.14	4.308	
3,000.0	2,998.6	2,997.5	2,996.6	10.9	4.3	149.23	-27.0	-37.3	72.5	58.0	14.50	4.998	
3,100.0	3,098.1	3,096.8	3,095.7	11.2	4.3	148.40	-33.7	-39.2	84.0	69.2	14.86	5.654	
3,200.0	3,197.6	3,196.1	3,194.8	11.5	4.3	147.77	-40.4	-41.1	95.6	80.4	15.23	6.279	
3,300.0	3,297.2	3,295.4	3,293.8	11.9	4.3	147.27	-47.0	-42.9	107.2	91.6	15.60	6.874	
3,400.0	3,396.7	3,394.8	3,392.9	12.2	4.3	146.87	-53.7	-44.8	118.9	102.9	15.98	7.440	
3,500.0	3,496.3	3,494.1	3,492.0	12.5	4.3	146.54	-60.4	-46.7	130.5	114.1	16.35	7.979	
3,600.0	3,595.8	3,593.4	3,591.1	12.9	4.3	146.27	-67.1	-48.5	142.1	125.4	16.73	8.492	
3,700.0	3,695.4	3,692.7	3,690.1	13.2	4.3	146.04	-73.7	-50.4	153.7	136.6	17.12	8.981	
3,800.0	3,794.9	3,792.0	3,789.2	13.6	4.3	145.84	-80.4	-52.2	165.3	147.8	17.50	9.447	
3,900.0	3,894.5	3,891.4	3,888.3	13.9	4.3	145.66	-87.1	-54.1	177.0	159.1	17.89	9.892	
4,000.0	3,994.0	3,990.7	3,987.4	14.2	4.3	145.51	-93.7	-56.0	188.6	170.3	18.28	10.316	
4,100.0	4,093.5	4,090.0	4,086.5	14.6	4.3	145.37	-100.4	-57.8	200.2	181.5	18.68	10.721	
4,200.0	4,193.1	4,189.3	4,185.5	14.9	4.3	145.25	-107.1	-59.7	211.9	192.8	19.07	11.107	
4,300.0	4,292.6	4,288.7	4,284.6	15.3	4.4	145.15	-113.8	-61.5	223.5	204.0	19.47	11.477	
4,400.0	4,392.2	4,388.0	4,383.7	15.6	4.4	145.05	-120.4	-63.4	235.1	215.2	19.88	11.830	
4,500.0	4,491.7	4,487.3	4,482.8	16.0	4.4	144.96	-127.1	-65.3	246.8	226.5	20.28	12.167	
4,600.0	4,591.3	4,586.6	4,581.9	16.3	4.5	144.88	-133.8	-67.1	258.4	237.7	20.69	12.490	
4,700.0	4,690.8	4,685.9	4,680.9	16.7	4.5	144.81	-140.5	-69.0	270.0	248.9	21.10	12.800	
4,800.0	4,790.4	4,785.3	4,780.0	17.0	4.6	144.74	-147.1	-70.9	281.7	260.1	21.51	13.096	
4,900.0	4,889.9	4,884.6	4,879.1	17.4	4.7	144.68	-153.8	-72.7	293.3	271.4	21.92	13.380	
5,000.0	4,989.5	4,983.9	4,978.2	17.7	4.7	144.62	-160.5	-74.6	304.9	282.6	22.34	13.652	
5,100.0	5,089.0	5,083.2	5,077.2	18.1	4.8	144.57	-167.2	-76.4	316.6	293.8	22.75	13.913	
5,200.0	5,188.5	5,182.5	5,176.3	18.4	4.8	144.52	-173.8	-78.3	328.2	305.0	23.17	14.164	
5,300.0	5,288.1	5,281.9	5,275.4	18.8	4.9	144.48	-180.5	-80.2	339.8	316.2	23.59	14.404	
5,400.0	5,387.6	5,381.2	5,374.5	19.2	5.0	144.43	-187.2	-82.0	351.5	327.4	24.01	14.635	
5,500.0	5,487.2	5,480.5	5,473.6	19.5	5.0	144.39	-193.8	-83.9	363.1	338.7	24.44	14.858	
5,600.0	5,586.7	5,579.8	5,572.6	19.9	5.1	144.36	-200.5	-85.7	374.7	349.9	24.86	15.071	
5,700.0	5,686.3	5,679.1	5,671.7	20.2	5.2	144.32	-207.2	-87.6	386.4	361.1	25.29	15.277	
5,800.0	5,785.8	5,778.5	5,770.8	20.6	5.2	144.29	-213.9	-89.5	398.0	372.3	25.72	15.474	
5,900.0	5,885.4	5,877.8	5,869.9	20.9	5.3	144.26	-220.5	-91.3	409.6	383.5	26.15	15.665	
6,000.0	5,984.9	5,977.1	5,969.0	21.3	5.4	144.23	-227.2	-93.2	421.3	394.7	26.58	15.848	
6,100.0	6,084.4	6,076.4	6,068.0	21.7	5.5	144.20	-233.9	-95.0	432.9	405.9	27.01	16.025	
6,200.0	6,184.0	6,175.7	6,167.1	22.0	5.5	144.17	-240.6	-96.9	444.5	417.1	27.45	16.195	
6,300.0	6,283.5	6,275.1	6,266.2	22.4	5.6	144.15	-247.2	-98.8	456.2	428.3	27.88	16.360	
6,400.0	6,383.1	6,374.4	6,365.3	22.7	5.7	144.12	-253.9	-100.6	467.8	439.5	28.32	16.518	
6,500.0	6,482.6	6,473.7	6,464.3	23.1	5.8	144.10	-260.6	-102.5	479.5	450.7	28.76	16.671	
6,600.0	6,582.2	6,573.0	6,563.4	23.4	5.9	144.08	-267.3	-104.4	491.1	461.9	29.20	16.819	
6,700.0	6,681.7	6,671.1	6,661.7	23.8	5.9	144.14	-273.5	-106.1	502.3	472.6	29.65	16.940	
6,800.0	6,781.3	6,771.7	6,761.8	24.2	6.0	144.37	-277.9	-107.3	512.5	482.4	30.10	17.026	
6,900.0	6,880.8	6,886.5	6,876.6	24.5	6.1	144.76	-280.5	-108.0	521.7	491.1	30.55	17.078	
7,000.0	6,980.4	6,990.8	6,980.9	24.9	6.2	145.32	-281.2	-108.2	529.9	498.9	30.98	17.107	
7,100.0	7,079.9	7,090.3	7,080.4	25.2	6.2	145.89	-281.2	-108.2	537.8	506.4	31.38	17.139	

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

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COMPASS 5000.15 Build 91E

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well FEZ FEDERAL COM #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3268.2usft (TBD)
Reference Site:	FEZ FEDERAL PROJECT (BULLDOG 2535)	MD Reference:	*KB=30' @ 3268.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	FEZ FEDERAL COM #707H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design FEZ FEDERAL PROJECT (BULLDOG 2535) - FEZ FEDERAL COM #710H - OWB - PWP1													Offset Site Error:	0.0 usft
Survey Program: 0-Standard Keeper 104, 11892-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 Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
7,200.0	7,179.4	7,189.9	7,179.9	25.6	6.3	146.45	-281.2	-108.2	545.7	513.9	31.78	17.171		
7,300.0	7,279.0	7,289.4	7,279.5	26.0	6.3	147.00	-281.2	-108.2	553.7	521.5	32.19	17.203		
7,400.0	7,378.5	7,389.0	7,379.0	26.3	6.3	147.53	-281.2	-108.2	561.7	529.1	32.59	17.235		
7,500.0	7,478.1	7,488.5	7,478.6	26.7	6.4	148.04	-281.2	-108.2	569.8	536.8	33.00	17.267		
7,600.0	7,577.6	7,588.1	7,578.1	27.0	6.4	148.54	-281.2	-108.2	577.9	544.5	33.41	17.298		
7,700.0	7,677.2	7,687.6	7,677.7	27.4	6.5	149.03	-281.2	-108.2	586.1	552.2	33.82	17.330		
7,800.0	7,776.7	7,787.2	7,777.2	27.8	6.6	149.50	-281.2	-108.2	594.3	560.0	34.23	17.362		
7,900.0	7,876.3	7,886.7	7,876.8	28.1	6.6	149.96	-281.2	-108.2	602.5	567.9	34.64	17.394		
8,000.0	7,975.8	7,986.2	7,976.3	28.5	6.7	150.40	-281.2	-108.2	610.8	575.7	35.05	17.425		
8,100.0	8,075.3	8,085.8	8,075.8	28.8	6.7	150.84	-281.2	-108.2	619.1	583.6	35.46	17.457		
8,200.0	8,174.9	8,185.3	8,175.4	29.2	6.8	151.26	-281.2	-108.2	627.4	591.6	35.88	17.488		
8,300.0	8,274.4	8,284.9	8,274.9	29.6	6.8	151.68	-281.2	-108.2	635.8	599.5	36.29	17.519		
8,400.0	8,374.0	8,384.4	8,374.5	29.9	6.9	152.08	-281.2	-108.2	644.2	607.5	36.71	17.550		
8,500.0	8,473.5	8,484.0	8,474.0	30.3	7.0	152.47	-281.2	-108.2	652.7	615.5	37.12	17.581		
8,600.0	8,573.1	8,583.5	8,573.6	30.6	7.0	152.85	-281.2	-108.2	661.1	623.6	37.54	17.612		
8,700.0	8,672.6	8,683.1	8,673.1	31.0	7.1	153.22	-281.2	-108.2	669.6	631.7	37.96	17.642		
8,800.0	8,772.2	8,782.6	8,772.7	31.4	7.2	153.58	-281.2	-108.2	678.2	639.8	38.38	17.672		
8,900.0	8,871.7	8,882.1	8,872.2	31.7	7.2	153.94	-281.2	-108.2	686.7	647.9	38.79	17.702		
9,000.0	8,971.2	8,981.7	8,971.7	32.1	7.3	154.28	-281.2	-108.2	695.3	656.1	39.21	17.732		
9,100.0	9,070.8	9,081.2	9,071.3	32.5	7.3	154.62	-281.2	-108.2	703.9	664.3	39.63	17.762		
9,200.0	9,170.3	9,180.8	9,170.8	32.8	7.4	154.95	-281.2	-108.2	712.5	672.5	40.05	17.791		
9,300.0	9,269.9	9,280.3	9,270.4	33.2	7.5	155.27	-281.2	-108.2	721.2	680.7	40.47	17.820		
9,400.0	9,369.4	9,379.9	9,369.9	33.5	7.6	155.58	-281.2	-108.2	729.9	689.0	40.89	17.849		
9,500.0	9,469.0	9,479.4	9,469.5	33.9	7.6	155.88	-281.2	-108.2	738.6	697.2	41.31	17.878		
9,600.0	9,568.5	9,579.0	9,569.0	34.3	7.7	156.18	-281.2	-108.2	747.3	705.5	41.73	17.906		
9,700.0	9,668.1	9,678.5	9,668.6	34.6	7.8	156.47	-281.2	-108.2	756.0	713.9	42.15	17.934		
9,800.0	9,767.6	9,778.0	9,768.1	35.0	7.8	156.76	-281.2	-108.2	764.8	722.2	42.58	17.962		
9,900.0	9,867.2	9,877.6	9,867.7	35.4	7.9	157.04	-281.2	-108.2	773.5	730.5	43.00	17.990		
10,000.0	9,966.7	9,977.1	9,967.2	35.7	8.0	157.31	-281.2	-108.2	782.3	738.9	43.42	18.017		
10,100.0	10,066.2	10,076.7	10,066.7	36.1	8.1	157.58	-281.2	-108.2	791.1	747.3	43.84	18.044		
10,200.0	10,165.8	10,176.2	10,166.3	36.4	8.2	157.84	-281.2	-108.2	799.9	755.7	44.27	18.071		
10,300.0	10,265.3	10,275.8	10,265.8	36.8	8.2	158.09	-281.2	-108.2	808.8	764.1	44.69	18.098		
10,400.0	10,364.9	10,375.3	10,365.4	37.2	8.3	158.34	-281.2	-108.2	817.6	772.5	45.11	18.124		
10,500.0	10,464.4	10,474.9	10,464.9	37.5	8.4	158.58	-281.2	-108.2	826.5	781.0	45.54	18.150		
10,600.0	10,564.0	10,574.4	10,564.5	37.9	8.5	158.82	-281.2	-108.2	835.4	789.4	45.96	18.176		
10,700.0	10,663.5	10,674.0	10,664.0	38.3	8.6	159.06	-281.2	-108.2	844.3	797.9	46.39	18.201		
10,800.0	10,763.1	10,773.5	10,763.6	38.6	8.7	159.28	-281.2	-108.2	853.2	806.4	46.81	18.226		
10,900.0	10,862.6	10,873.0	10,863.1	39.0	8.7	159.51	-281.2	-108.2	862.1	814.9	47.24	18.251		
11,000.0	10,962.1	10,972.6	10,962.6	39.4	8.8	159.73	-281.2	-108.2	871.1	823.4	47.66	18.276		
11,100.0	11,061.7	11,072.1	11,062.2	39.7	8.9	159.94	-281.2	-108.2	880.0	831.9	48.09	18.300		
11,200.0	11,161.2	11,171.7	11,161.7	40.1	9.0	160.15	-281.2	-108.2	889.0	840.5	48.51	18.325		
11,300.0	11,260.8	11,271.2	11,261.3	40.4	9.1	160.36	-281.2	-108.2	898.0	849.0	48.94	18.348		
11,400.0	11,360.3	11,370.8	11,360.8	40.8	9.2	160.56	-281.2	-108.2	906.9	857.6	49.37	18.372		
11,500.0	11,459.9	11,470.3	11,460.4	41.2	9.3	160.76	-281.2	-108.2	915.9	866.1	49.79	18.395		
11,600.0	11,559.4	11,569.9	11,559.9	41.5	9.4	160.95	-281.2	-108.2	924.9	874.7	50.22	18.418		
11,700.0	11,659.0	11,669.4	11,659.5	41.9	9.5	161.14	-281.2	-108.2	934.0	883.3	50.64	18.441		
11,718.3	11,677.2	11,687.6	11,677.7	42.0	9.5	161.18	-281.2	-108.2	935.6	884.9	50.72	18.446		
11,750.0	11,708.7	11,719.2	11,709.2	42.1	9.6	-164.84	-281.2	-108.2	938.5	887.6	50.86	18.453		
11,800.0	11,758.4	11,768.8	11,758.9	42.3	9.6	-129.62	-281.2	-108.2	943.1	892.0	51.06	18.469		
11,850.0	11,807.6	11,818.0	11,808.1	42.4	9.6	-115.39	-281.2	-108.2	947.8	896.6	51.26	18.490		
11,900.0	11,855.9	11,866.3	11,856.4	42.6	9.7	-108.84	-281.2	-108.2	952.7	901.3	51.44	18.520		
11,950.0	11,902.9	11,915.7	11,905.8	42.8	9.7	-105.44	-280.7	-108.2	957.9	906.2	51.62	18.557		

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

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COMPASS 5000.15 Build 91E

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well FEZ FEDERAL COM #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3268.2usft (TBD)
Reference Site:	FEZ FEDERAL PROJECT (BULLDOG 2535)	MD Reference:	*KB=30' @ 3268.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	FEZ FEDERAL COM #707H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
FEZ FEDERAL PROJECT (BULLDOG 2535) - FEZ FEDERAL COM #710H - OWB - PWP1												Offset Well Error:	3.0 usft
Survey Program: 0-Standard Keeper 104, 11892-MWD+IFR1+FDIR													
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
12,000.0	11,948.4	11,968.9	11,958.7	42.9	9.7	-103.51	-276.1	-108.3	963.2	911.4	51.79	18.596	
12,050.0	11,991.9	12,024.0	12,012.9	43.0	9.7	-102.35	-266.1	-108.4	968.5	916.5	51.98	18.632	
12,100.0	12,033.2	12,081.1	12,067.7	43.2	9.8	-101.66	-250.3	-108.5	973.9	921.7	52.18	18.664	
12,150.0	12,071.8	12,140.3	12,122.7	43.3	9.8	-101.25	-228.3	-108.7	979.2	926.8	52.40	18.688	
12,200.0	12,107.6	12,201.9	12,177.1	43.4	9.9	-101.04	-199.5	-108.9	984.3	931.7	52.64	18.701	
12,250.0	12,140.3	12,265.8	12,229.9	43.5	9.9	-100.96	-163.6	-109.3	989.2	936.3	52.90	18.699	
12,300.0	12,169.5	12,332.0	12,280.1	43.6	10.0	-100.95	-120.5	-109.6	993.7	940.5	53.19	18.681	
12,350.0	12,195.1	12,400.5	12,326.4	43.7	10.1	-100.99	-70.1	-110.1	997.8	944.3	53.51	18.647	

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 EAST	Local Co-ordinate Reference:	Well FEZ FEDERAL COM #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3268.2usft (TBD)
Reference Site:	FEZ FEDERAL PROJECT (BULLDOG 2535)	MD Reference:	*KB=30' @ 3268.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	FEZ FEDERAL COM #707H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
FEZ FEDERAL PROJECT (BULLDOG 2535) - GIPPLE FEDERAL COM 134H - OWB - AWP												Offset Well Error:	3.0 usft
Survey Program: 176-MWD													
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
21,800.0	12,206.9	11,902.0	11,886.2	93.6	48.7	-9.59	10,380.1	733.1	970.3	874.9	95.33	10.178	
21,900.0	12,207.2	11,902.0	11,886.2	94.3	48.7	-9.59	10,380.1	733.1	878.6	782.6	95.98	9.154	
22,000.0	12,207.5	11,902.0	11,886.2	95.1	48.7	-9.59	10,380.1	733.1	789.0	692.1	96.88	8.144	
22,100.0	12,207.8	11,944.6	11,924.7	95.9	49.4	-10.81	10,398.1	732.3	699.0	600.9	98.08	7.126	
22,200.0	12,208.0	11,964.9	11,942.5	96.6	49.8	-11.43	10,407.9	732.1	612.0	512.5	99.45	6.154	
22,300.0	12,208.3	11,996.0	11,968.8	97.4	50.3	-12.44	10,424.5	732.1	527.6	426.6	101.06	5.221	
22,400.0	12,208.6	12,019.4	11,987.9	98.2	50.5	-13.26	10,438.0	732.3	446.2	343.1	103.05	4.330	
22,500.0	12,208.9	12,056.3	12,017.0	98.9	50.9	-14.76	10,460.8	732.4	368.5	263.2	105.30	3.499	
22,527.6	12,209.0	12,067.6	12,025.5	99.1	51.0	-15.26	10,468.1	732.5	347.9	241.9	106.00	3.282 CC, ES, SF	

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 EAST	Local Co-ordinate Reference:	Well FEZ FEDERAL COM #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3268.2usft (TBD)
Reference Site:	FEZ FEDERAL PROJECT (BULLDOG 2535)	MD Reference:	*KB=30' @ 3268.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	FEZ FEDERAL COM #707H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design FEZ FEDERAL PROJECT (BULLDOG 2535) - GIPPLE FEDERAL COM 214H - OWB - AWP												Offset Site Error:	0.0 usft
Survey Program: 172-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
21,800.0	12,206.9	12,091.7	12,076.0	93.6	47.7	-65.21	10,359.6	415.3	974.0	871.4	102.67	9.487	
21,900.0	12,207.2	12,114.3	12,097.3	94.3	47.8	-67.66	10,365.4	420.2	883.9	779.1	104.76	8.437	
22,000.0	12,207.5	12,139.0	12,120.1	95.1	47.9	-70.42	10,373.3	425.7	796.5	689.2	107.32	7.422	
22,100.0	12,207.8	12,139.0	12,120.1	95.9	47.9	-70.42	10,373.3	425.7	711.1	600.3	110.77	6.420	
22,200.0	12,208.0	12,139.0	12,120.1	96.6	47.9	-70.42	10,373.3	425.7	630.1	514.9	115.18	5.470	
22,300.0	12,208.3	12,168.1	12,146.0	97.4	48.1	-73.79	10,384.7	432.2	553.5	433.2	120.28	4.602	
22,400.0	12,208.6	12,190.2	12,165.0	98.2	48.3	-76.41	10,394.8	437.2	484.2	357.5	126.70	3.822	
22,500.0	12,208.9	12,234.0	12,200.4	98.9	48.8	-81.65	10,418.6	446.9	424.7	291.1	133.63	3.178	
22,527.6	12,209.0	12,234.0	12,200.4	99.1	48.8	-81.65	10,418.6	446.9	409.9	273.9	135.97	3.014 CC, ES, SF	

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 EAST	Local Co-ordinate Reference:	Well FEZ FEDERAL COM #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3268.2usft (TBD)
Reference Site:	FEZ FEDERAL PROJECT (BULLDOG 2535)	MD Reference:	*KB=30' @ 3268.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	FEZ FEDERAL COM #707H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design FEZ FEDERAL PROJECT (BULLDOG 2535) - GIPPLE FEDERAL COM 218H - OWB - AWP												Offset Site Error:	0.0 usft
Survey Program: 176-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	
21,700.0	12,206.6	12,044.0	12,026.5	92.8	44.6	55.06	10,297.6	1,116.7	992.7	894.4	98.31	10.098	
21,800.0	12,206.9	12,044.0	12,026.5	93.6	44.6	55.06	10,297.6	1,116.7	901.7	801.7	100.03	9.015	
21,900.0	12,207.2	12,044.0	12,026.5	94.3	44.6	55.06	10,297.6	1,116.7	812.8	710.6	102.26	7.949	
22,000.0	12,207.5	12,044.0	12,026.5	95.1	44.6	55.06	10,297.6	1,116.7	726.8	621.7	105.18	6.910	
22,100.0	12,207.8	12,080.2	12,060.9	95.9	45.5	59.33	10,308.8	1,115.9	642.5	533.3	109.25	5.881	
22,200.0	12,208.0	12,097.1	12,076.5	96.6	45.9	61.40	10,315.1	1,115.4	563.5	449.4	114.15	4.937	
22,300.0	12,208.3	12,138.0	12,113.2	97.4	47.0	66.60	10,333.1	1,113.7	491.5	371.2	120.23	4.088	
22,400.0	12,208.6	12,138.0	12,113.2	98.2	47.0	66.60	10,333.1	1,113.7	426.6	299.0	127.62	3.343	
22,500.0	12,208.9	12,180.4	12,149.6	98.9	47.3	72.24	10,355.0	1,112.1	374.0	239.2	134.73	2.776	
22,527.6	12,209.0	12,195.9	12,162.4	99.1	47.4	74.35	10,363.5	1,111.8	362.1	225.5	136.56	2.652 CC, ES, SF	

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 EAST	Local Co-ordinate Reference:	Well FEZ FEDERAL COM #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3268.2usft (TBD)
Reference Site:	FEZ FEDERAL PROJECT (BULLDOG 2535)	MD Reference:	*KB=30' @ 3268.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	FEZ FEDERAL COM #707H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to *KB=30' @ 3268.2usft (TBD)

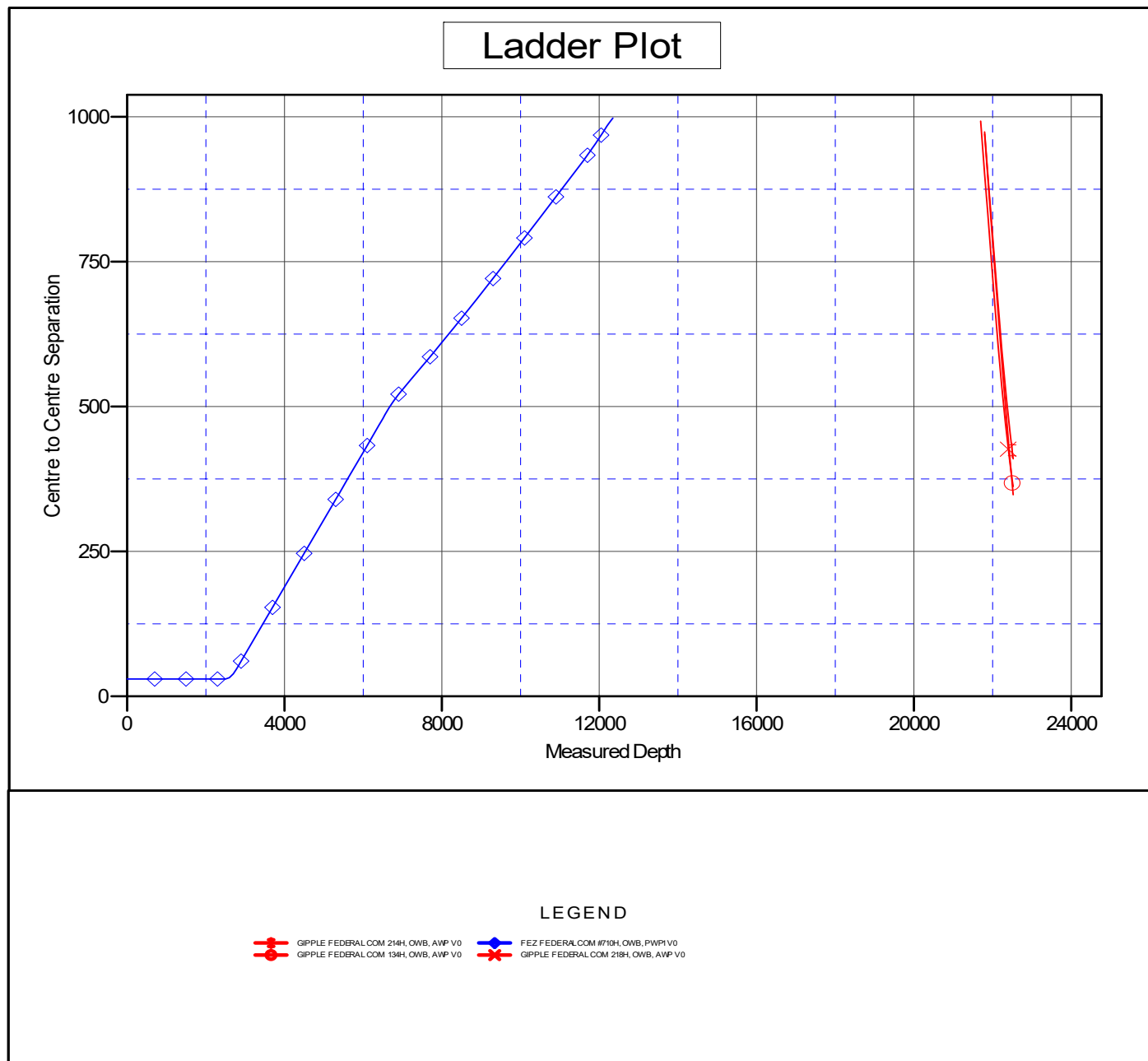
Offset Depths are relative to Offset Datum

Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: FEZ FEDERAL COM #707H

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

Grid Convergence at Surface is: 0.51°



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

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COMPASS 5000.15 Build 91E

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well FEZ FEDERAL COM #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3268.2usft (TBD)
Reference Site:	FEZ FEDERAL PROJECT (BULLDOG 2535)	MD Reference:	*KB=30' @ 3268.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	FEZ FEDERAL COM #707H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to *KB=30' @ 3268.2usft (TBD)

Offset Depths are relative to Offset Datum

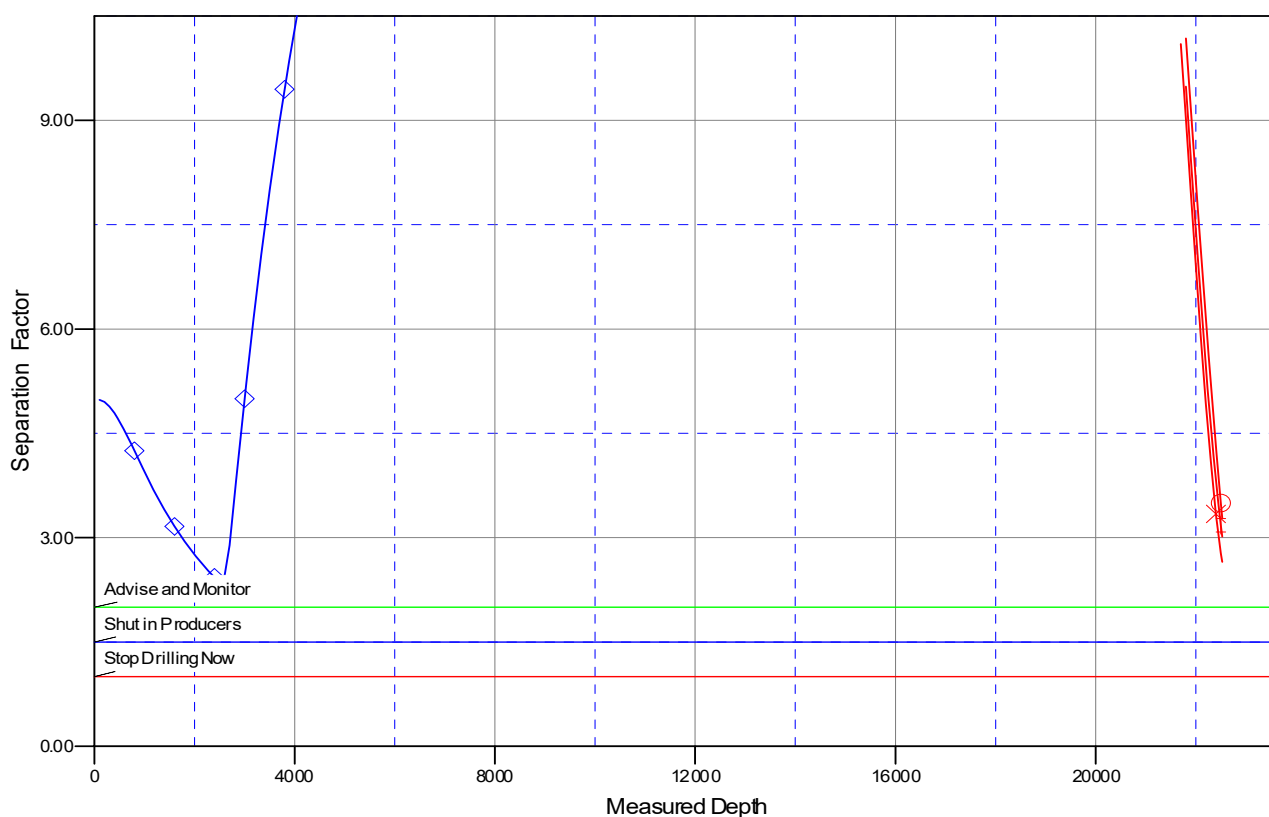
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: FEZ FEDERAL COM #707H

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

Grid Convergence at Surface is: 0.51°

Separation Factor Plot



LEGEND

GIPPLE FEDERAL COM 214H, OWB, AWP V0
 FEZ FEDERAL COM #710H, OWB, PWP1 V0
 GIPPLE FEDERAL COM 134H, OWB, AWP V0
 GIPPLE FEDERAL COM 218H, OWB, AWP V0

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

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

CONDITIONS

Action 17723

CONDITIONS OF APPROVAL

Operator:	COG OPERATING LLC	600 W Illinois Ave	Midland, TX79701	OGRID:	229137	Action Number:	17723	Action Type:	C-103A
OCD Reviewer	Condition								
pkautz	None								