State of New Mexico
Energy, Minerals and Natural Resources Department

New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-3 APD form.

Operator Signature Date: 9/19/2018
Well information;
Operator 20605, Well Name and Number Draperfly 2408 13C Com 2H

API# 30-045-35889, Section 13, Township 24 (N)/S, Range 8 E(W)

Conditions of Approval: (See the below checked and handwritten conditions)

- ✗ Notify Aztec OCD 24hrs prior to casing & cement.
- ✗ Hold C-104 for directional survey & "As Drilled" Plat
- ✗ Hold C-104 for NSL, NSP, DHC
- o Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- o Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
  - A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
  - A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
  - A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
- o Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- o Submit Gas Capture Plan form prior to spudding or initiating recompletion operations
- ✓ Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84
- ✓ Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.
- ✓ Well-bore communication is regulated under 19.15.29 NMAC. This requires well-bore Communication to be reported in accordance with 19.15.29.8.

[signature] 5/24/19

NMOCD Approved by Signature Date

1220 South St. Francis Drive • Santa Fe, New Mexico 87505
Phone (505) 476-3460 • Fax (505) 476-3462 • www.emnrd.state.nm.us/ocd

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Form 3160-3
(June 2015)

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM001409

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☑ Single Zone ☐ Multiple Zone

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

8. Lease Name and Well No.
DRAGONFLY 2408 13C COM
2H

2. Name of Operator
LOGOS OPERATING LLC

9. API Well No.
30-045-35889

3a. Address
2010 Afton Place FARMINGTON NM 87401

3b. Phone No. *(include area code)*
(505)324-4145

10. Field and Pool, or Exploratory
DUFFERS POINT / ESCRITO / GALLUP

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface C LOT 1 / 781 FNL / 2191 FWL / LAT 36.318923 / LONG -107.635204
At proposed prod. zone E SWNW / 2285 FNL / 20 FWL / LAT 36.314861 / LONG -107.660431

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 13 / T24N / R8W / NMP

14. Distance in miles and direction from nearest town or post office*
42.7 miles

12. County or Parish
SAN JUAN

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
781 feet

16. No of acres in lease
629.79

17. Spacing Unit dedicated to this well
234

NMOCD

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
40 feet

19. Proposed Depth
6030 feet / 13476 feet

20. BLM/BIA Bond No. in file
FED: NMB001387

APR 30 2019

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
7193 feet

22. Approximate date work will start*
10/21/2018

23. Estimated duration
45 days

DISTRICT III

24. Attachments

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

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

25. Signature
(Electronic Submission)

Name *(Printed/Typed)*
Marie Florez / Ph: (505)419-8420

Date
09/19/2018

Title
Regulatory Specialist

Approved by *(Signature)*
/s/ Maurice Ellis
AFM

Name *(Printed/Typed)*

Date
4/25/19

Title

Office
FARMINGTON

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

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

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"

NMOCD

PV

(Continued on page 2)

*(Instructions on page 2)

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) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-045-35889	19859/22619	DUFFERS POINT-GALLUP DAKOTA/ESCRITO GALLUP ASSOCIATED

[4] Property Code	[5] Property Name	[6] Well Number
329068	DRAGONFLY 2408 13C COM	2H

[7] OGRID No.	[8] Operator Name	[9] Elevation
289408	LOGOS OPERATING, LLC	7193

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	13	24-N	8-W	1	781	NORTH	2191	WEST	SAN JUAN

[11] Bottom Hole Location If Different From Surface

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	14	24-N	8-W	3	2285	NORTH	20	WEST	SAN JUAN

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
PROJECT AREA 234.00 ACRES SEE DETAIL BELOW			

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

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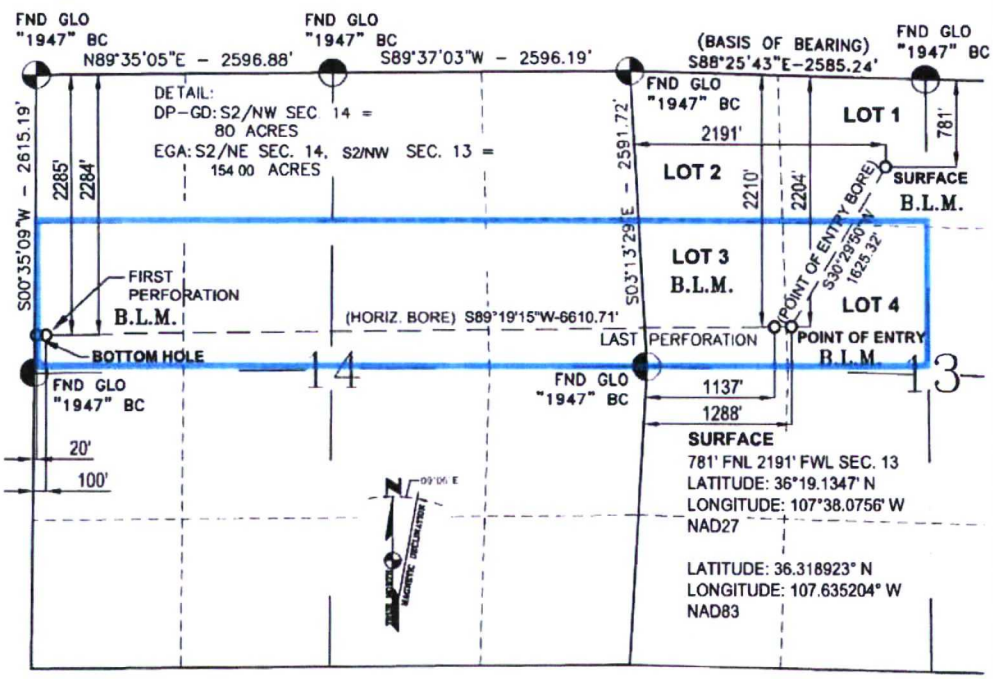


BOTTOM HOLE
2285' FNL 20' FWL SEC. 14
LATITUDE: 36°18.8910' N
LONGITUDE: 107°39.5892' W
NAD27

LATITUDE: 36.314861° N
LONGITUDE: 107.660431° W
NAD83

FIRST PERFORATION
2284' FNL 100' FWL SEC. 14
LATITUDE: 36°18.8911' N
LONGITUDE: 107°39.5729' W
NAD27

LATITUDE: 36.314864° N
LONGITUDE: 107.660159° W
NAD83

LAST PERFORATION
2210' FNL 1137' FWL SEC. 13
LATITUDE: 36°18.9036' N
LONGITUDE: 107°38.2741' W
NAD27

LATITUDE: 36.315073° N
LONGITUDE: 107.638511° W
NAD83

POINT OF ENTRY
2204' FNL 1288' FWL SEC. 13
LATITUDE: 36°18.9039' N
LONGITUDE: 107°38.2436' W
NAD27

LATITUDE: 36.315078° N
LONGITUDE: 107.638003° W
NAD83

BASIS OF BEARING:

BETWEEN FOUND MONUMENTS AT THE NORTHWEST CORNER AND THE NORTH QUARTER CORNER OF SECTION 13, TOWNSHIP 24 NORTH, RANGE 8 WEST, N.M.P.M. SAN JUAN COUNTY, NEW MEXICO.

LINE BEARS: S 88°25'43" E A DISTANCE OF 2585.24 FEET AS MEASURED BY G.P.S. LOCAL GRID NAD83

[17] OPERATOR CERTIFICATION

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

Tamra Sessions 9/20/18
Signature Date

Tamra Sessions
Printed Name

tsessions@logosresourcesllc.com
E-mail Address

[18] SURVEYOR CERTIFICATION

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

JULY 13, 2018
Date of Survey

Signature and Seal of Professional Surveyor

GLEN W. RUSSELL NEW MEXICO 15703 LICENSED PROFESSIONAL SURVEYOR

GLEN W. RUSSELL
Certificate Number 15703

Surface = Federal

LOGOS Operating, LLC
Operations Plan

Note: This procedure will be adjusted onsite based upon actual conditions

Date:	September 13, 2018	Pool:	Duffers Point – Gallup Dakota/Escrito Gallup Associated
Well Name:	**Dragonfly 2408 13C Com 2H**	Elevation:	7,193'
Surface Location:	Sec 13, T24N, R8W 781 FNL, 2191 FWL (36.318923° N, 107.635204° W – NAD83)	Measured Depth:	13,476'
Bottom Hole Location:	Sec 14, T24N, R8W 2285 FNL, 20 FWL (36.314861° N, 107.660431° W – NAD83)	County:	San Juan

Lease Serial # NMNM136074

I. GEOLOGY

A. Formation Tops (KB): Estimated top of important geological markers:
SURFACE FORMATION - NACIMIENTO

NAME	MD	TVD	NAME	MD	TVD
OJO ALAMO	1,730	1,730	*POINT LOOKOUT	4,764	4,764
KIRTLAND	1,905	1,905	*MANCOS	5,045	5,045
*FRUITLAND	2,120	2,120	GALLUP	5,799	5,731
*PICTURED CLIFFS	2,452	2,452	KICKOFF POINT	5,778	5,526
CHACRA	2,872	2,872	LANDING POINT	6,867	6,101
*CLIFF HOUSE	4,004	4,004	TD	13,476	6,030
MENEFEE	4,008	4,008			

* indicates depth at which anticipated water, oil, gas or other mineral bearing formations are expected to be encountered.

B. **MUD LOGGING PROGRAM;** Mudlogger on location from KOP to TD.

C. **LOGGING PROGRAM;** LWD GR from surface casing to TD.

D. **NATURAL GAUGES:** Gauge any noticeable increases in gas flow. Record all gauges in Tour book and on morning reports.

II. DRILLING

A. **MUD PROGRAM:** LSND mud (WBM) will be used to drill the 12-1/4" Surface hole, the 8 ¾" Directional Vertical hole, and the curve portion of the wellbore. A LSND (WBM) or (OBM) will be used to drill the lateral portion of well. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing. Notify Engineering of any mud losses.

B. **BOP TESTING:** While drill pipe is in use, the pipe rams and the blind rams will be function tested once each trip. The BOPE will be tested to **250 psi (Low) for 5 minutes** and **1500 psi (High) for 10 minutes.** Pressure test surface casing to **600 psi for 30 minutes** and intermediate casing to **1500 psi for 30 minutes.** Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. The drum brakes will be

inspected and tested each tour. **All tests and inspections will be recorded and logged with time and results.**

III. MATERIALS

A. CASING EQUIPMENT;

CASING TYPE	OH SIZE (IN)	DEPTH (MD)	CSG SIZE	WEIGHT	GRADE	CONN
SURFACE	12.25"	320'	9.625"	36 LBS	J-55 or equiv	STC
INTERMEDIATE	8.75"	6,867'	7"	23 LBS	J-55 or equiv	LTC
PRODUCTION	6.125"	6717' – 13,476	4.5"	11.6 LBS	P-110 or equiv	LTC
TIE BACK	6.125"	Surf. – 6,717'	4.5"	11.6 LBS	P-110 or equiv	LTC

B. FLOAT EQUIPMENT;

1. SURFACE CASING: 9-5/8" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (4) joints of Surface Casing.
2. INTERMEDIATE CASING: 7" cement nose guide shoe with a self-fill insert float. Place float collar one joint above the shoe. Install (1) centralizer on each of the bottom (3) joints and one standard centralizer every (3) joints to 2,500 ft. Run (1) centralizer at 2,500 ft., 2,300ft., 2,000ft., 1,500 ft., and 1,000 ft.
3. PRODUCTION LINER: Run 4-1/2" Liner with cement nose guide Float Shoe+ 2jts. of 4-1/2" casing+ Landing Collar+ 4-1/2" pup joint+ 1 RSI (Sliding Sleeve) positioned inside the **330** ft Hard line. Centralizer program will be determined by Wellbore condition and when Lateral is evaluated by Geoscientists and Reservoir Engineers. Set seals on Liner Hanger. Liner to be pressure tested during completion operations.

C. CEMENTING:

(Note: Volumes may be adjusted onsite due to actual conditions)

1. SURFACE: 5 bbl Fresh Water Spacer, 100 sx (161 cu.ft.) of 14.5 ppg Type 1-11 (Neat G) + 20% Fly Ash cement w/ 7.41 gal/sack mix water ratio @ 1.61 cu ft/sx yield. Calculated @volume+ 50% excess. woc 12 hours. Test csg to 600 psi. Total Volume: (160cu-ft/100 sx/ Bbls).TOC at Surface.

2. INTERMEDIATE: Stage 1: Spacer #1: 20 bbl (112 cuft) Chemwash. Lead Cement: 258 bbls, 743 sks, (1448 cuft), 12.3 ppg@ 1.95 cuft/sk yield. Tail Cement: 51 bbls, 221 sks, (287 cuft), 13.5 ppg@ 1.3 cu'ft/sk yield. Displacement: Displace w/ +/- 262 bbl Drilling mud or water. Total Cement: 309 bbls, 964 sks, (1735 cuft)

3. PRODUCTION LINER: Spacer #1:10 bbl (56.cu-ft) Water Spacer. Spacer #2: 40 bbl 9.5 ppg (224.6 cu-ft) Tuned Spacer Ill.Spacer #3: 10 bbl Water Spacer. Lead Cement: Extencem TM System. Yield 1.36 cuft/sk 13.3 ppg (610 sx / 830 cuft /148 bbls). Tail Spacer: 40 BBL of MMCR. Displacement: Displace w/ +/- 103 bbl Fr Water.

IV. COMPLETION

A. CBL

CBLs and/or Temperature Surveys Will Be Performed as Needed or Required

B. PRESSURE TEST

Pressure test 4-1/2" casing to 4500 psi max, hold at 1500 psi for 30 minutes. Increase pressure to Open RSI sleeves.

C. STIMULATION

Stimulate with sand, water and N2. Isolate stages with flow through frac plugs. Drill out frac plugs and flowback lateral.

D. PRODUCTION TUBING

Run 2-7/8", 6.5#, J-55, EUE tubing

LOGOS RESOURCES II, LLC

Company: Logos Operating LLC
Project: San Juan, NM NAD83
Site: Dragonfly 2408-13C
Well: Dragonfly 2408-13C Com 2H
Wellbore: OH
Design: Plan #1

PROJECT DETAILS: San Juan, NM NAD83

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Western Zone
System Datum: Mean Sea Level
Local North: True

Scientific Drilling

Azimuths to True North
Magnetic North: 8.82°

Magnetic Field
Strength: 49573.2snT
Dip Angle: 62.92°
Date: 8/29/2018
Model: HDGM

WELL DETAILS: Dragonfly 2408-13C Com 2H

GL 7193' & RKB 14' @ 7207.00usft (Aztec 920)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1935447.98	2781458.99	36.3189230	-107.6352040

Plan: Plan #1 (Dragonfly 2408-13C Com 2H/OH)

Created By: Janie Collins Date: 15:13, August 29 2018

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
DF 2H POE	6101.00	-1399.68	-824.61	1934046.61	2780637.25	36.3150780	-107.6380030
DF 2H BHL	6030.00	-1477.71	-7432.08	1933955.05	2774029.95	36.3148610	-107.6604310
DF 2H FPerf	6030.00	-1476.64	-7351.95	1933956.28	2774110.08	36.3148640	-107.6601590
DF 2H LPerf	6072.00	-1401.49	-974.27	1934044.49	2780487.59	36.3150730	-107.6385110

SECTION DETAILS

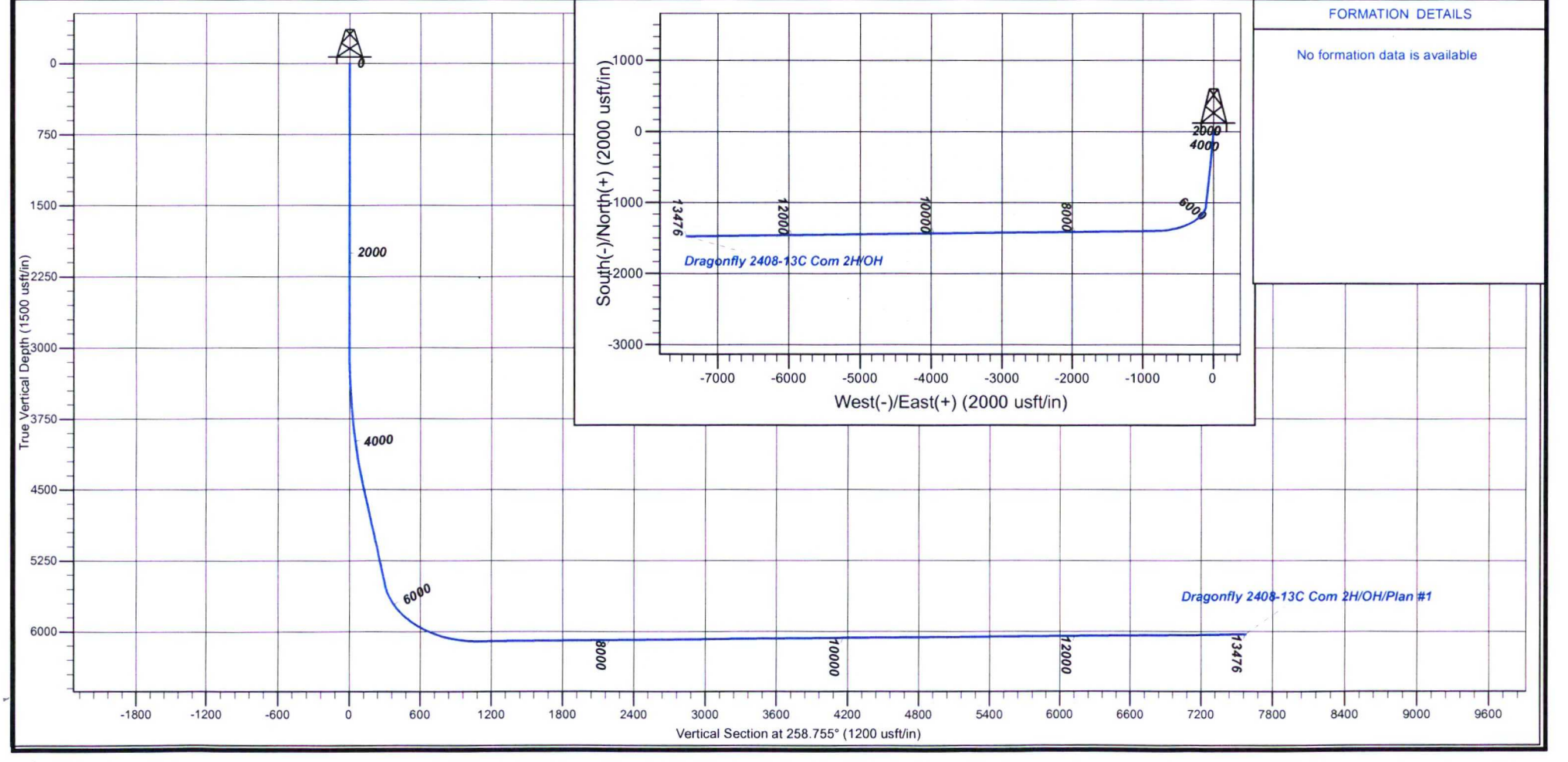
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.000	0.000	0.00	0.00	0.00	0.00	0.00	0.00	
3000.00	0.000	0.000	3000.00	0.00	0.00	0.00	0.00	0.00	
4561.24	31.225	185.887	4485.10	-412.81	-42.57	2.00	185.89	122.25	
5778.24	31.225	185.887	5525.80	-1040.37	-107.28	0.00	0.00	308.10	
6867.37	90.616	269.323	6101.00	-1399.68	-824.61	8.00	84.06	1081.73	DF 2H POE
13475.68	90.616	269.323	6030.00	-1477.71	-7432.08	0.00	0.00	7577.56	DF 2H BHL

CASING DETAILS

No casing data is available

FORMATION DETAILS

No formation data is available



LOGOS RESOURCES II, LLC

Logos Operating LLC

San Juan, NM NAD83
Dragonfly 2408-13C
Dragonfly 2408-13C Com 2H

OH

Plan: Plan #1

Standard Planning Report

29 August, 2018

Scientific Drilling

Database:	Grand Junction District	**Local Co-ordinate Reference:**	Well Dragonfly 2408-13C Com 2H
Company:	Logos Operating LLC	**TVD Reference:**	GL 7193' & RKB 14' @ 7207.00usft (Aztec 920)
Project:	San Juan, NM NAD83	**MD Reference:**	GL 7193' & RKB 14' @ 7207.00usft (Aztec 920)
Site:	Dragonfly 2408-13C	**North Reference:**	True
Well:	Dragonfly 2408-13C Com 2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project	San Juan, NM NAD83		
Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Western Zone		

Site	Dragonfly 2408-13C				
Site Position:		**Northing:**	1,935,479.24 usft	**Latitude:**	36.3190090
From:	Lat/Long	**Easting:**	2,781,434.47 usft	**Longitude:**	-107.6352870
Position Uncertainty:	0.00 usft	**Slot Radius:**	13.20 in	**Grid Convergence:**	0.12 °

Well	Dragonfly 2408-13C Com 2H					
Well Position	**+N/-S**	-31.31 usft	**Northing:**	1,935,447.98 usft	**Latitude:**	36.3189230
	+E/-W	24.45 usft	**Easting:**	2,781,458.99 usft	**Longitude:**	-107.6352040
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	0.00 usft	**Ground Level:**	7,193.00 usft

Wellbore	OH			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	HDGM	8/29/2018	8.82	62.92	49,573

Design	Plan #1				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	0.00	0.00	0.00	258.755	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.000	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,000.00	0.000	0.000	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,561.24	31.225	185.887	4,485.10	-412.81	-42.57	2.00	2.00	0.00	185.89	
5,778.24	31.225	185.887	5,525.80	-1,040.37	-107.28	0.00	0.00	0.00	0.00	
6,867.37	90.616	269.323	6,101.00	-1,399.68	-824.61	8.00	5.45	7.66	84.06	DF 2H POE
13,475.68	90.616	269.323	6,030.00	-1,477.71	-7,432.08	0.00	0.00	0.00	0.00	DF 2H BHL

Database:	Grand Junction District	**Local Co-ordinate Reference:**	Well Dragonfly 2408-13C Com 2H
Company:	Logos Operating LLC	**TVD Reference:**	GL 7193' & RKB 14' @ 7207.00usft (Aztec 920)
Project:	San Juan, NM NAD83	**MD Reference:**	GL 7193' & RKB 14' @ 7207.00usft (Aztec 920)
Site:	Dragonfly 2408-13C	**North Reference:**	True
Well:	Dragonfly 2408-13C Com 2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.000	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.000	0.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.000	0.000	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.000	0.000	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.000	0.000	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.000	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.000	0.000	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.000	0.000	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.000	0.000	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.000	0.000	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.000	0.000	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.000	0.000	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.000	0.000	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.000	0.000	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.000	0.000	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.000	0.000	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.000	0.000	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.000	0.000	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.000	0.000	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.000	0.000	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.000	0.000	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.000	0.000	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.000	0.000	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.000	0.000	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.000	0.000	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.000	0.000	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.000	0.000	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.000	0.000	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.000	0.000	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.000	0.000	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.000	0.000	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	2.000	185.887	3,099.98	-1.74	-0.18	0.51	2.00	2.00	0.00
3,200.00	4.000	185.887	3,199.84	-6.94	-0.72	2.06	2.00	2.00	0.00
3,300.00	6.000	185.887	3,299.45	-15.61	-1.61	4.62	2.00	2.00	0.00
3,400.00	8.000	185.887	3,398.70	-27.73	-2.86	8.21	2.00	2.00	0.00
3,500.00	10.000	185.887	3,497.47	-43.29	-4.46	12.82	2.00	2.00	0.00
3,600.00	12.000	185.887	3,595.62	-62.27	-6.42	18.44	2.00	2.00	0.00
3,700.00	14.000	185.887	3,693.06	-84.65	-8.73	25.07	2.00	2.00	0.00
3,800.00	16.000	185.887	3,789.64	-110.39	-11.38	32.69	2.00	2.00	0.00
3,900.00	18.000	185.887	3,885.27	-139.47	-14.38	41.30	2.00	2.00	0.00
4,000.00	20.000	185.887	3,979.82	-171.86	-17.72	50.90	2.00	2.00	0.00
4,100.00	22.000	185.887	4,073.17	-207.50	-21.40	61.45	2.00	2.00	0.00
4,200.00	24.000	185.887	4,165.21	-246.37	-25.40	72.96	2.00	2.00	0.00
4,300.00	26.000	185.887	4,255.84	-288.40	-29.74	85.41	2.00	2.00	0.00
4,400.00	28.000	185.887	4,344.94	-333.56	-34.40	98.78	2.00	2.00	0.00
4,500.00	30.000	185.887	4,432.39	-381.78	-39.37	113.06	2.00	2.00	0.00
4,561.24	31.225	185.887	4,485.10	-412.81	-42.57	122.25	2.00	2.00	0.00
4,600.00	31.225	185.887	4,518.24	-432.79	-44.63	128.17	0.00	0.00	0.00
4,700.00	31.225	185.887	4,603.76	-484.36	-49.95	143.44	0.00	0.00	0.00
4,800.00	31.225	185.887	4,689.27	-535.92	-55.26	158.71	0.00	0.00	0.00
4,900.00	31.225	185.887	4,774.79	-587.49	-60.58	173.98	0.00	0.00	0.00
5,000.00	31.225	185.887	4,860.30	-639.06	-65.90	189.26	0.00	0.00	0.00

Database:	Grand Junction District	**Local Co-ordinate Reference:**	Well Dragonfly 2408-13C Com 2H
Company:	Logos Operating LLC	**TVD Reference:**	GL 7193' & RKB 14' @ 7207.00usft (Aztec 920)
Project:	San Juan, NM NAD83	**MD Reference:**	GL 7193' & RKB 14' @ 7207.00usft (Aztec 920)
Site:	Dragonfly 2408-13C	**North Reference:**	True
Well:	Dragonfly 2408-13C Com 2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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)
5,100.00	31.225	185.887	4,945.81	-690.62	-71.21	204.53	0.00	0.00	0.00
5,200.00	31.225	185.887	5,031.33	-742.19	-76.53	219.80	0.00	0.00	0.00
5,300.00	31.225	185.887	5,116.84	-793.76	-81.85	235.07	0.00	0.00	0.00
5,400.00	31.225	185.887	5,202.36	-845.32	-87.17	250.34	0.00	0.00	0.00
5,500.00	31.225	185.887	5,287.87	-896.89	-92.48	265.61	0.00	0.00	0.00
5,600.00	31.225	185.887	5,373.38	-948.45	-97.80	280.88	0.00	0.00	0.00
5,700.00	31.225	185.887	5,458.90	-1,000.02	-103.12	296.15	0.00	0.00	0.00
5,778.24	31.225	185.887	5,525.80	-1,040.37	-107.28	308.10	0.00	0.00	0.00
5,800.00	31.448	189.207	5,544.39	-1,051.58	-108.77	311.75	8.00	1.02	15.26
5,900.00	33.515	203.632	5,628.87	-1,102.71	-124.03	336.69	8.00	2.07	14.42
6,000.00	37.048	216.089	5,710.60	-1,152.42	-152.89	374.69	8.00	3.53	12.46
6,100.00	41.669	226.410	5,787.98	-1,199.76	-194.78	425.01	8.00	4.62	10.32
6,200.00	47.054	234.889	5,859.51	-1,243.81	-248.88	486.66	8.00	5.38	8.48
6,300.00	52.960	241.944	5,923.80	-1,283.69	-314.15	558.45	8.00	5.91	7.05
6,400.00	59.222	247.950	5,979.59	-1,318.65	-389.31	638.99	8.00	6.26	6.01
6,500.00	65.727	253.207	6,025.81	-1,347.99	-472.90	726.69	8.00	6.50	5.26
6,600.00	72.395	257.944	6,061.54	-1,371.15	-563.29	819.86	8.00	6.67	4.74
6,700.00	79.167	262.340	6,086.10	-1,387.68	-658.72	916.69	8.00	6.77	4.40
6,800.00	85.999	266.541	6,099.01	-1,397.25	-757.34	1,015.28	8.00	6.83	4.20
6,867.37	90.616	269.323	6,101.00	-1,399.68	-824.61	1,081.73	8.00	6.85	4.13
DF 2H POE									
6,900.00	90.616	269.323	6,100.65	-1,400.06	-857.24	1,113.81	0.00	0.00	0.00
7,000.00	90.616	269.323	6,099.58	-1,401.24	-957.22	1,212.10	0.00	0.00	0.00
7,017.34	90.616	269.323	6,099.39	-1,401.45	-974.56	1,229.15	0.00	0.00	0.00
DF 2H LPerf									
7,100.00	90.616	269.323	6,098.50	-1,402.42	-1,057.21	1,310.40	0.00	0.00	0.00
7,200.00	90.616	269.323	6,097.43	-1,403.60	-1,157.20	1,408.70	0.00	0.00	0.00
7,300.00	90.616	269.323	6,096.35	-1,404.79	-1,257.19	1,507.00	0.00	0.00	0.00
7,400.00	90.616	269.323	6,095.28	-1,405.97	-1,357.17	1,605.30	0.00	0.00	0.00
7,500.00	90.616	269.323	6,094.20	-1,407.15	-1,457.16	1,703.59	0.00	0.00	0.00
7,600.00	90.616	269.323	6,093.13	-1,408.33	-1,557.15	1,801.89	0.00	0.00	0.00
7,700.00	90.616	269.323	6,092.05	-1,409.51	-1,657.13	1,900.19	0.00	0.00	0.00
7,800.00	90.616	269.323	6,090.98	-1,410.69	-1,757.12	1,998.49	0.00	0.00	0.00
7,900.00	90.616	269.323	6,089.91	-1,411.87	-1,857.11	2,096.79	0.00	0.00	0.00
8,000.00	90.616	269.323	6,088.83	-1,413.05	-1,957.10	2,195.08	0.00	0.00	0.00
8,100.00	90.616	269.323	6,087.76	-1,414.23	-2,057.08	2,293.38	0.00	0.00	0.00
8,200.00	90.616	269.323	6,086.68	-1,415.41	-2,157.07	2,391.68	0.00	0.00	0.00
8,300.00	90.616	269.323	6,085.61	-1,416.59	-2,257.06	2,489.98	0.00	0.00	0.00
8,400.00	90.616	269.323	6,084.53	-1,417.78	-2,357.05	2,588.27	0.00	0.00	0.00
8,500.00	90.616	269.323	6,083.46	-1,418.96	-2,457.03	2,686.57	0.00	0.00	0.00
8,600.00	90.616	269.323	6,082.38	-1,420.14	-2,557.02	2,784.87	0.00	0.00	0.00
8,700.00	90.616	269.323	6,081.31	-1,421.32	-2,657.01	2,883.17	0.00	0.00	0.00
8,800.00	90.616	269.323	6,080.24	-1,422.50	-2,756.99	2,981.47	0.00	0.00	0.00
8,900.00	90.616	269.323	6,079.16	-1,423.68	-2,856.98	3,079.76	0.00	0.00	0.00
9,000.00	90.616	269.323	6,078.09	-1,424.86	-2,956.97	3,178.06	0.00	0.00	0.00
9,100.00	90.616	269.323	6,077.01	-1,426.04	-3,056.96	3,276.36	0.00	0.00	0.00
9,200.00	90.616	269.323	6,075.94	-1,427.22	-3,156.94	3,374.66	0.00	0.00	0.00
9,300.00	90.616	269.323	6,074.86	-1,428.40	-3,256.93	3,472.96	0.00	0.00	0.00
9,400.00	90.616	269.323	6,073.79	-1,429.58	-3,356.92	3,571.25	0.00	0.00	0.00
9,500.00	90.616	269.323	6,072.72	-1,430.76	-3,456.90	3,669.55	0.00	0.00	0.00
9,600.00	90.616	269.323	6,071.64	-1,431.95	-3,556.89	3,767.85	0.00	0.00	0.00
9,700.00	90.616	269.323	6,070.57	-1,433.13	-3,656.88	3,866.15	0.00	0.00	0.00

Database:	Grand Junction District	**Local Co-ordinate Reference:**	Well Dragonfly 2408-13C Com 2H
Company:	Logos Operating LLC	**TVD Reference:**	GL 7193' & RKB 14' @ 7207.00usft (Aztec 920)
Project:	San Juan, NM NAD83	**MD Reference:**	GL 7193' & RKB 14' @ 7207.00usft (Aztec 920)
Site:	Dragonfly 2408-13C	**North Reference:**	True
Well:	Dragonfly 2408-13C Com 2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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)
9,800.00	90.616	269.323	6,069.49	-1,434.31	-3,756.87	3,964.44	0.00	0.00	0.00
9,900.00	90.616	269.323	6,068.42	-1,435.49	-3,856.85	4,062.74	0.00	0.00	0.00
10,000.00	90.616	269.323	6,067.34	-1,436.67	-3,956.84	4,161.04	0.00	0.00	0.00
10,100.00	90.616	269.323	6,066.27	-1,437.85	-4,056.83	4,259.34	0.00	0.00	0.00
10,200.00	90.616	269.323	6,065.19	-1,439.03	-4,156.82	4,357.64	0.00	0.00	0.00
10,300.00	90.616	269.323	6,064.12	-1,440.21	-4,256.80	4,455.93	0.00	0.00	0.00
10,400.00	90.616	269.323	6,063.05	-1,441.39	-4,356.79	4,554.23	0.00	0.00	0.00
10,500.00	90.616	269.323	6,061.97	-1,442.57	-4,456.78	4,652.53	0.00	0.00	0.00
10,600.00	90.616	269.323	6,060.90	-1,443.75	-4,556.76	4,750.83	0.00	0.00	0.00
10,700.00	90.616	269.323	6,059.82	-1,444.93	-4,656.75	4,849.13	0.00	0.00	0.00
10,800.00	90.616	269.323	6,058.75	-1,446.12	-4,756.74	4,947.42	0.00	0.00	0.00
10,900.00	90.616	269.323	6,057.67	-1,447.30	-4,856.73	5,045.72	0.00	0.00	0.00
11,000.00	90.616	269.323	6,056.60	-1,448.48	-4,956.71	5,144.02	0.00	0.00	0.00
11,100.00	90.616	269.323	6,055.52	-1,449.66	-5,056.70	5,242.32	0.00	0.00	0.00
11,200.00	90.616	269.323	6,054.45	-1,450.84	-5,156.69	5,340.62	0.00	0.00	0.00
11,300.00	90.616	269.323	6,053.38	-1,452.02	-5,256.68	5,438.91	0.00	0.00	0.00
11,400.00	90.616	269.323	6,052.30	-1,453.20	-5,356.66	5,537.21	0.00	0.00	0.00
11,500.00	90.616	269.323	6,051.23	-1,454.38	-5,456.65	5,635.51	0.00	0.00	0.00
11,600.00	90.616	269.323	6,050.15	-1,455.56	-5,556.64	5,733.81	0.00	0.00	0.00
11,700.00	90.616	269.323	6,049.08	-1,456.74	-5,656.62	5,832.10	0.00	0.00	0.00
11,800.00	90.616	269.323	6,048.00	-1,457.92	-5,756.61	5,930.40	0.00	0.00	0.00
11,900.00	90.616	269.323	6,046.93	-1,459.11	-5,856.60	6,028.70	0.00	0.00	0.00
12,000.00	90.616	269.323	6,045.85	-1,460.29	-5,956.59	6,127.00	0.00	0.00	0.00
12,100.00	90.616	269.323	6,044.78	-1,461.47	-6,056.57	6,225.30	0.00	0.00	0.00
12,200.00	90.616	269.323	6,043.71	-1,462.65	-6,156.56	6,323.59	0.00	0.00	0.00
12,300.00	90.616	269.323	6,042.63	-1,463.83	-6,256.55	6,421.89	0.00	0.00	0.00
12,400.00	90.616	269.323	6,041.56	-1,465.01	-6,356.54	6,520.19	0.00	0.00	0.00
12,500.00	90.616	269.323	6,040.48	-1,466.19	-6,456.52	6,618.49	0.00	0.00	0.00
12,600.00	90.616	269.323	6,039.41	-1,467.37	-6,556.51	6,716.79	0.00	0.00	0.00
12,700.00	90.616	269.323	6,038.33	-1,468.55	-6,656.50	6,815.08	0.00	0.00	0.00
12,800.00	90.616	269.323	6,037.26	-1,469.73	-6,756.48	6,913.38	0.00	0.00	0.00
12,900.00	90.616	269.323	6,036.19	-1,470.91	-6,856.47	7,011.68	0.00	0.00	0.00
13,000.00	90.616	269.323	6,035.11	-1,472.09	-6,956.46	7,109.98	0.00	0.00	0.00
13,100.00	90.616	269.323	6,034.04	-1,473.28	-7,056.45	7,208.27	0.00	0.00	0.00
13,200.00	90.616	269.323	6,032.96	-1,474.46	-7,156.43	7,306.57	0.00	0.00	0.00
13,300.00	90.616	269.323	6,031.89	-1,475.64	-7,256.42	7,404.87	0.00	0.00	0.00
13,395.55	90.616	269.323	6,030.86	-1,476.77	-7,351.95	7,498.79	0.00	0.00	0.00
DF 2H FPerf									
13,400.00	90.616	269.323	6,030.81	-1,476.82	-7,356.41	7,503.17	0.00	0.00	0.00
13,475.68	90.616	269.323	6,030.00	-1,477.71	-7,432.08	7,577.56	0.00	0.00	0.00
DF 2H BHL									

Database:	Grand Junction District	**Local Co-ordinate Reference:**	Well Dragonfly 2408-13C Com 2H
Company:	Logos Operating LLC	**TVD Reference:**	GL 7193' & RKB 14' @ 7207.00usft (Aztec 920)
Project:	San Juan, NM NAD83	**MD Reference:**	GL 7193' & RKB 14' @ 7207.00usft (Aztec 920)
Site:	Dragonfly 2408-13C	**North Reference:**	True
Well:	Dragonfly 2408-13C Com 2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
DF 2H BHL - plan hits target center - Point	0.000	0.000	6,030.00	-1,477.71	-7,432.08	1,933,955.05	2,774,029.95	36.3148610	-107.6604310
DF 2H FPerf - plan misses target center by 0.87usft at 13395.55usft MD (6030.86 TVD, -1476.77 N, -7351.95 E) - Point	0.000	0.000	6,030.00	-1,476.64	-7,351.95	1,933,956.28	2,774,110.08	36.3148640	-107.6601590
DF 2H LPerf - plan misses target center by 27.39usft at 7017.34usft MD (6099.39 TVD, -1401.45 N, -974.56 E) - Point	0.000	0.000	6,072.00	-1,401.49	-974.27	1,934,044.50	2,780,487.60	36.3150730	-107.6385110
DF 2H POE - plan hits target center - Point	0.000	0.000	6,101.00	-1,399.68	-824.61	1,934,046.62	2,780,637.25	36.3150780	-107.6380030

37. **Soil:** A minimum of the top 6 inches of soil material (topsoil) will be stripped and stockpiled in the construction zones around the well pad and other project areas. Topsoil would be stored separately from subsoil or other excavated material and at an appropriate depth to avoid the loss of soil nutrient value. If topsoil is stored for a length of time such that nutrients are depleted, amendments may be required to be added as advised by an environmental scientist or appropriate agent/contractor. Vehicle/equipment traffic would not be allowed to cross topsoil stockpiles. The topsoil would be protected using wattles or other BMPs so that erosion is minimized. Vegetation removed during construction, including slash/brush and trees 3 inches in diameter or less, will be chipped or mulched and incorporated into the topsoil as additional organic matter. Prior to reseeding, stockpiled soil material will be spread on the reclaimed portions of the pad (including the reserve pit and cut and fill slopes). Soil spreading will not occur when the ground or topsoil is frozen or wet.

Public Health and Safety

38. **Public Roads**: The hauling of equipment and materials on public roads to the project area would comply with New Mexico Department of Transportation regulations. LOGOS would notify the public of potential hazards by posting signage as necessary.
39. **Vehicular Travel**: Vehicles would be restricted to traveling within the permitted disturbance areas and existing areas of surface disturbance, such as existing roads and well pads.
40. **Safety**: Worker safety incidents would be reported to the BLM FFO as required under Notice to Lessees (NTL) 3A (USGS 1979). LOGOS would adhere to company safety policies, Occupational Safety and Health Administration regulations, and New Mexico Department of Transportation regulations.

Control of Waste

41. **Drilling:** Drilling of the horizontal laterals would be accomplished with water-based mud. All cuttings would be placed in metal containment bins and hauled to a commercial disposal facility or land farm. The closed-loop system storage tanks would be sized to ensure confinement of all fluids and would provide sufficient freeboard to prevent uncontrolled releases. Drilling fluids would be stored on-site in aboveground storage tanks. Upon termination of drilling operations, the drilling fluids would be recycled and transferred to other permitted closed-loop systems or returned to the vendor for reuse, as practical. All residual fluids would be hauled to a commercial disposal facility.
42. **Waste:** Portable toilets would be provided and maintained during construction, as needed. Garbage, trash, and other waste materials would be collected in a portable, self-contained, and fully enclosed trash container during drilling and completion operations. The accumulated trash would be removed, as needed, and would be disposed of at an authorized sanitary landfill. No trash would be buried or burned on location. Immediately after removal of the drilling rig, all debris and other waste materials not contained in the trash container would be cleaned up and removed from the well location.
43. **Chemicals and Hazardous Substances:** No chemicals subject to reporting under the Superfund Amendments and Reauthorization Act Title III in an amount equal to or greater than 10,000 pounds would be used, produced, stored, transported, or disposed annually in association with the drilling, testing, or completing of these wells. No extremely hazardous substances (as defined in 40 CFR 355)

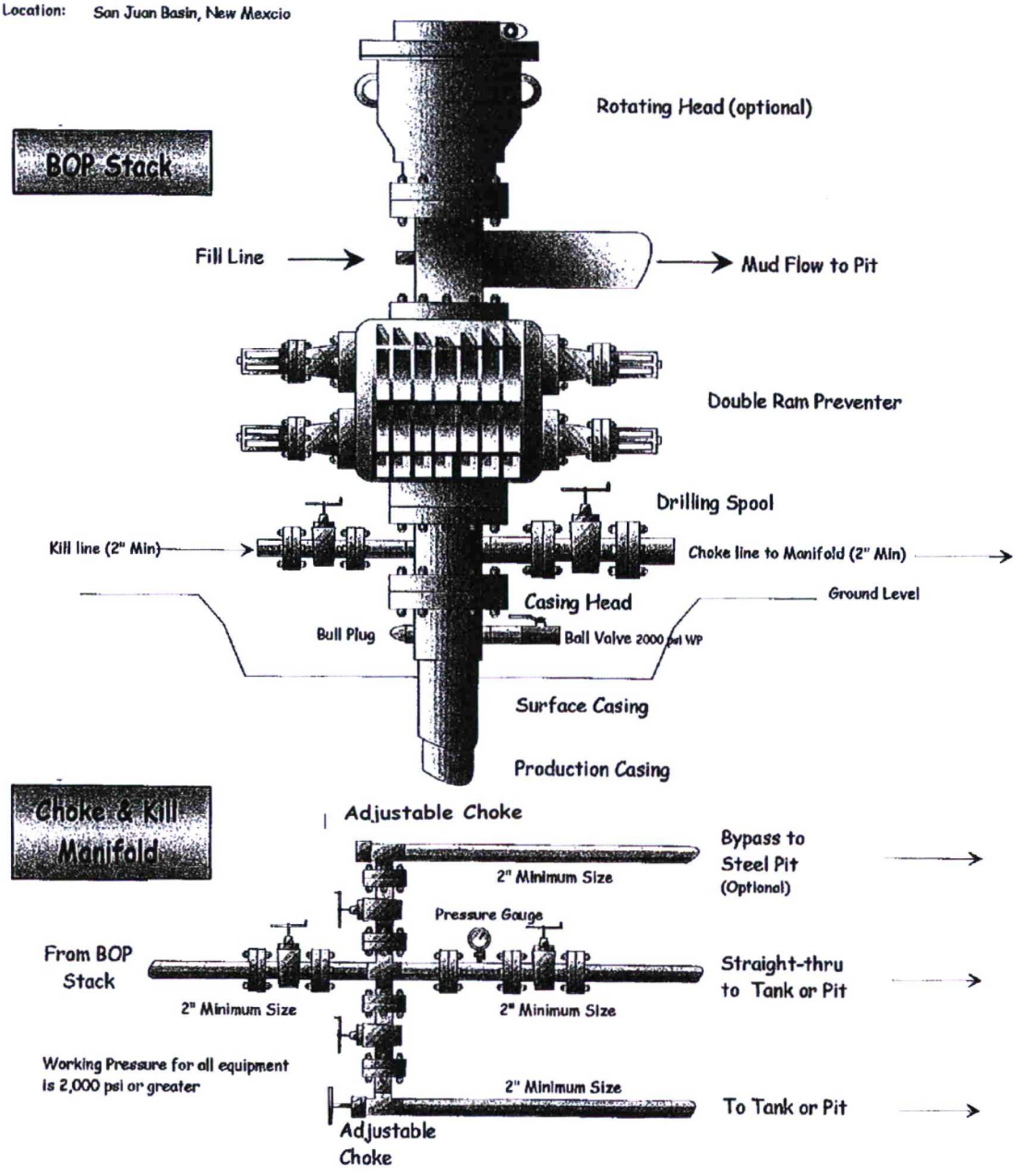
LOGOS RESOURCES II, LLC

Well Control Equipment Schematic for 2M Service

Attachment to Drilling Technical Program

Exhibit #1
Typical BOP setup

Location: San Juan Basin, New Mexcio



Directions from the Intersection of
Highway 550 and Highway 64 in Bloomfield, NM
to

LOGOS OPERATING, LLC

DRAGONFLY 2408 13C COM #2H
781' FNL 2191' FWL,
Section 13, T24N, R8W, N.M.P.M.,
San Juan County, New Mexico
Latitude: 36° 19'08.123" N
Longitude: 107° 38' 06.733" W
Nad 1983

From the Intersection of Highway 550 & Highway 64
Go South on Hwy 550 for 42.7 miles,
turn left (north-northwesterly) for 3.0 miles,
stay right (northwesterly) 0.8 miles,
stay right (northerly) 0.7 miles,
turn left (northerly) 0.5 miles,
stay left (northerly) 1.0 miles,
stay right (northerly) 0.7 miles,
stay left (northerly) 0.6 miles,
stay right (easterly) 2.4 miles
turn right (northerly) 0.6 miles,
turn left (southerly) 300'
stay right (southeasterly)
to the beginning of new access
on the right side of the field road, which begins and
continues southerly for 417.19'
to the new location.