



BLACKSPUR HZ LEDUC-WB 16-11-51-2W5 END of WELL REPORT

Rig: Horizon # 43

Prepared By: Derek Rae
February 22, 2021



BLACKSPUR HZ LEDUC-WB 16-11-51-2W5

Table of Contents

Section 1:	Well Summary, KPIs and Drill Curve
Section 2:	Drilling Summaries & Daily Drilling Reports
Section 3:	Mud Inventory, Usage & Costs
Section 4:	Equipment Rentals
Section 5:	Bit Records
Section 6:	Rig Time Breakup
Section 7:	Cost Breakdowns, Cost Overview & Cost Summaries
Section 8:	Casing Tallies & Cement
Section 9:	Final Directional Surveys
Section 10:	As-Drilled Survey
Section 11:	Tour Reports



Section 1

Well Summary, KPIs and Drill Curve



Initial Drill Summary
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

WELL DATA						
NAME		LICENSE #	UWI	LOCATION		
BLACKSPUR HZ LEDUC-WB 16-11-51-2		0502001	100/16-11-051-02W5/00	LEDUC-WB AB, Canada		
COST CENTRE	WORKING INTEREST	WELL TYPE	PRIMARY PRODUCT	WELL STATUS	PAD NAME	PAD PHASE
TBD	50%	Oil / Gas	Oil	Not Applicable	14-3-51-2W5 PAD	1
COUNTRY	PROVINCE		FIELD	SUB-FIELD		
Canada	AB		LEDUC-WB			

EVENT DATA					
NAME	STATUS	DRILL STYLE	AFE NUMBER	AFE \$	FORECAST
Drilling: Initial Drill	Rig Released	Single Rig	21DR0012	\$1,657,265.00	

SURFACE HOLE			
DLS POINT	COORDINATES	LATITUDE	LONGITUDE
14-03-051-02W5	65.00 m SOUTH by 726.40 m EAST	53.38085400	-114.21234200

WELLBORES					
Original Hole					
START		END			
2022-01-19 16:00		2022-01-30 23:59			
BOTTOM POINT		COORDINATES		LATITUDE	LONGITUDE
16-11-051-02W5		0.00 m by 0.00 m		53.38085400	-114.21234200
UWI					
100/16-11-051-02W5/00					
KICKOFF	HEEL	PROJECTED	MEASURED	TVD	LOGGER
1,007.00 m	1,615.00 m	4,202.00 m	4,088.00 m	611.56 m	0.00 m
KICKOFF DATE	HEEL DATE	MEASURED DEPTH DATE			
2022-01-21 13:20	2022-01-22 14:20	2022-01-27 12:15			

DRILLING DRILL SUMMARY						
CONTRACTOR	MOVE DATE	SPUD DATE	RELEASE DATE	MOVE > RELEASE	SPUD > RELEASE	
Horizon #43	2022-01-17 07:00	2022-01-19 16:00	2022-01-30 23:59	13.71 days	11.33 days	
SURVEYED ELEVATION	CUT / FILL	GROUND ELEVATION	KB ELEVATION	KB > GROUND	CF ELEVATION	CF > GROUND
742.30 m	-0.29 m	742.01 m	747.51 m	5.50 m	742.01 m	0.00 m
WATER USED	MUD LOST	SOLIDS DISPOSAL	FLUIDS DISPOSAL			
911.00 m³	-					
PUMP #1 MODEL	STROKE	LINER	OUTPUT	SIZE		
Work Force 1300	279.00 mm	152.00 mm	0.015 l/st	Triplex		
PUMP #2 MODEL	STROKE	LINER	OUTPUT	SIZE		
Work Force 1300	279.00 mm	152.00 mm	0.015 l/st	Triplex		

PERSONNEL			
SCOPE	TITLE	NAME	CONTACT
Drilling	Drilling Engineer	Derek Rae	403-701-0899
Drilling	Drilling Consultant	Mike Bowen	403-348-9127
Drilling	Drilling Consultant	Darren Burton	780-518-7767
Drilling	Drilling Manager	Nick Stanford	403-804-0296

CASING & CEMENTING

SURFACE									
CASING									
CODE	DESCRIPTION	COND	OD (mm)	DRIFT (mm)	WEIGHT (kg/m)	GRADE	#	LENGTH (m)	LANDED AT 271.00 m TOP (mKB)
S02	Float Shoe	New	244.5	0.0	0.00		1	0.49	270.51
S03	Casing Joint	New	244.5	226.6	53.67	J55	1	11.33	259.18
S01	Float Collar	New	244.5	0.0	0.00		1	0.37	258.81
S03	Casing Joint	New	244.5	226.6	53.67	J55	23	259.69	-0.88
RUN DATE	JOINTS DELIVERED 27 / 304.87 m	JOINTS ON LEASE 27 / 304.87 m	GUIDE SHOE 0.49 m	FLOAT COLLAR 259.18 m	STICK UP 0.88 m	LANDED AT 271.00 m			
CEMENT									
AMOUNT	TYPE	VOLUME	YIELD	% EXCESS	EST TOP	RETURNS	DENSITY	TYPES 1	
	(t)	(m³)	(m³/t)	(%)	(m)	(m³)	(kg/m³)		
15.00	TSC 1700-S Bulk Cement	14.09	0.9390	80.00	0.00	4.50	1,700.00		
ADDITIVES									
0.4% TLA, 0.4% AFA-7, 2% Calcium Chloride.									
CEMENT DATE	HOLE DEPTH	HOLE SIZE	MUD TYPE	MUD DENSITY	MUD VISCOSITY	MUD pH			
2022-01-20	271.00 m	311.00 mm	Gel chem	1,100.00 ka/m³	50.00 s/l	7			

INTERMEDIATE									
CASING									
CODE	DESCRIPTION	COND	OD (mm)	DRIFT (mm)	WEIGHT (kg/m)	GRADE	#	LENGTH (m)	LANDED AT 1,615.00 m TOP (mKB)
I01	Float Shoe	New	0.0	0.0	0.00		1	0.50	1,614.50
I03	Casing Joint	New	177.8	161.7	34.23	P-110	1	13.84	1,600.66

I02	Float Collar	New	0.0	0.0	0.00	1	0.41	1,600.25
I03	Casing Joint	New	177.8	161.7	34.23	130	1,601.03	-0.78
RUN DATE	JOINTS DELIVERED 132 / 1,626.53 m	JOINTS ON LEASE 132 / 1,626.53 m	GUIDE SHOE 0.50 m	FLOAT COLLAR 1,600.66 m	STICK UP 0.78 m	LANDED AT 1,615.00 m		

CEMENT									TYPES 3
AMOUNT	TYPE	VOLUME	YIELD	% EXCESS	EST TOP	RETURNS	DENSITY		
	(t)	(m ³)	(m ³ /t)	(%)	(m)	(m)	(m ³)	(kg/m ³)	
ADDITIVES	1.42Scavenger	3.00	2.1200	0.00	0.00	0.00	3.00	1,300.00	
2% OGC-60 + 4% AFA-7	14.57Titanium 1400-S	23.20	1.5920	90.00	0.00	9.00	1,400.00		
ADDITIVES	2% OGC-60 + 4% AFA-7	16.00T.A.C.-S	17.04	1.0650	90.00	990.00	0.00	1,600.00	
ADDITIVES	0.2% AFA-7 + 0.4% TWR-4 + 0.5% Gel + 0.2% TDH-2 + 0.2% CFR-12								
CEMENT DATE	HOLE DEPTH	HOLE SIZE	MUD TYPE	MUD DENSITY	MUD VISCOSITY	MUD pH			
2022-01-24	1,615.00 m	222.00 mm	Poylmer	1,060.00 kg/m ³	45.00 s/l	12			

PRODUCTION

CASING										LANDED AT 4,078.00 m
CODE	DESCRIPTION	COND	OD	DRIFT	WEIGHT	GRADE	#	LENGTH	TOP	
			(mm)	(mm)	(kg/m)			(m)	(mKB)	
P01	Guide Shoe - Re entry guide		0.0	0.0	0.00		1	0.27	4,077.73	
P02	Pup Joint		114.3	0.0	20.09		1	1.85	4,075.88	
P03	Float Collar		114.3	0.0	0.00		1	0.30	4,075.58	
P02	Pup Joint		114.3	0.0	20.09		1	1.86	4,073.72	
P12	Secondary Float Collar		114.3	0.0	0.00		1	0.30	4,073.42	
P02	Pup Joint		114.3	0.0	20.09		1	1.86	4,071.56	
P04	Landing Collar - Wiper Dart Landing collar		114.3	0.0	0.00		1	0.48	4,071.08	
P02	Pup Joint		114.3	0.0	20.09		1	1.86	4,069.22	
P05	Casing Joint	New	114.3	99.6	20.09	P-110	1	13.38	4,055.84	
P06	Toe Port - Interra (41.3mpa)		114.3	0.0	20.09	P110	1	0.55	4,055.29	
P05	Casing Joint	New	114.3	99.6	20.09	P-110	1	13.17	4,042.12	
P06	Toe Port - Interra (41.3mpa)		114.3	0.0	20.09	P110	1	0.55	4,041.57	
P05	Casing Joint	New	114.3	99.6	20.09	P-110	1	13.38	4,028.19	
P02	Pup Joint		114.3	0.0	20.09		1	6.30	4,021.89	
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	4,020.78	
P02	Pup Joint		114.3	0.0	20.09		1	6.72	4,014.06	
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.54	3,987.52	
P02	Pup Joint		114.3	0.0	20.09		1	6.30	3,981.22	
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	3,980.11	
P02	Pup Joint		114.3	0.0	20.09		1	6.75	3,973.36	
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	25.52	3,947.84	
P02	Pup Joint		114.3	0.0	20.09		1	6.30	3,941.54	
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	3,940.43	
P02	Pup Joint		114.3	0.0	20.09		1	6.68	3,933.75	
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.76	3,906.99	
P02	Pup Joint		114.3	0.0	20.09		1	6.30	3,900.69	
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	3,899.58	
P02	Pup Joint		114.3	0.0	20.09		1	6.55	3,893.03	
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.59	3,866.44	
P02	Pup Joint		114.3	0.0	20.09		1	6.30	3,860.14	
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	3,859.03	
P02	Pup Joint		114.3	0.0	20.09		1	6.73	3,852.30	
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.60	3,825.70	
P02	Pup Joint		114.3	0.0	20.09		1	6.30	3,819.40	
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	3,818.29	
P02	Pup Joint		114.3	0.0	20.09		1	6.65	3,811.64	
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.75	3,784.89	
P02	Pup Joint		114.3	0.0	20.09		1	6.30	3,778.59	
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	3,777.48	
P02	Pup Joint		114.3	0.0	20.09		1	6.54	3,770.94	
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.76	3,744.18	
P02	Pup Joint		114.3	0.0	20.09		1	6.30	3,737.88	
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	3,736.77	
P02	Pup Joint		114.3	0.0	20.09		1	6.74	3,730.03	
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.44	3,703.59	
P02	Pup Joint		114.3	0.0	20.09		1	6.30	3,697.29	
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	3,696.18	
P02	Pup Joint		114.3	0.0	20.09		1	6.58	3,689.60	
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.38	3,663.22	
P02	Pup Joint		114.3	0.0	20.09		1	6.30	3,656.92	
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	3,655.81	
P02	Pup Joint		114.3	0.0	20.09		1	6.69	3,649.12	
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.51	3,622.61	
P02	Pup Joint		114.3	0.0	20.09		1	6.30	3,616.31	
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	3,615.20	
P02	Pup Joint		114.3	0.0	20.09		1	6.81	3,608.39	
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.59	3,581.80	
P02	Pup Joint		114.3	0.0	20.09		1	6.30	3,575.50	
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	3,574.39	
P02	Pup Joint		114.3	0.0	20.09		1	6.63	3,567.76	
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.44	3,541.32	
P02	Pup Joint		114.3	0.0	20.09		1	6.30	3,535.02	
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	3,533.91	
P02	Pup Joint		114.3	0.0	20.09		1	6.57	3,527.34	
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.76	3,500.58	
P02	Pup Joint		114.3	0.0	20.09		1	6.30	3,494.28	
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	3,493.17	
P02	Pup Joint		114.3	0.0	20.09		1	6.65	3,486.52	
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.59	3,459.93	
P02	Pup Joint		114.3	0.0	20.09		1	6.30	3,453.63	
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	3,452.52	
P02	Pup Joint		114.3	0.0	20.09		1	6.50	3,446.02	
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.61	3,419.41	
P02	Pup Joint		114.3	0.0	20.09		1	6.30	3,413.11	



Initial Drill Summary
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	3,412.00
P02	Pup Joint		114.3	0.0	20.09		1	6.75	3,405.25
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.45	3,378.80
P02	Pup Joint		114.3	0.0	20.09		1	6.30	3,372.50
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	3,371.39
P02	Pup Joint		114.3	0.0	20.09		1	6.75	3,364.64
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.30	3,338.34
P02	Pup Joint		114.3	0.0	20.09		1	6.30	3,332.04
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	3,330.93
P02	Pup Joint		114.3	0.0	20.09		1	6.61	3,324.32
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.74	3,297.58
P02	Pup Joint		114.3	0.0	20.09		1	6.30	3,291.28
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	3,290.17
P02	Pup Joint		114.3	0.0	20.09		1	6.51	3,283.66
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.49	3,257.17
P02	Pup Joint		114.3	0.0	20.09		1	6.30	3,250.87
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	3,249.76
P02	Pup Joint		114.3	0.0	20.09		1	6.75	3,243.01
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.44	3,216.57
P02	Pup Joint		114.3	0.0	20.09		1	6.30	3,210.27
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	3,209.16
P02	Pup Joint		114.3	0.0	20.09		1	6.62	3,202.54
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.60	3,175.94
P02	Pup Joint		114.3	0.0	20.09		1	6.30	3,169.64
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	3,168.53
P02	Pup Joint		114.3	0.0	20.09		1	6.59	3,161.94
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.76	3,135.18
P02	Pup Joint		114.3	0.0	20.09		1	6.30	3,128.88
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	3,127.77
P02	Pup Joint		114.3	0.0	20.09		1	6.57	3,121.20
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.60	3,094.60
P02	Pup Joint		114.3	0.0	20.09		1	6.30	3,088.30
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	3,087.19
P02	Pup Joint		114.3	0.0	20.09		1	6.77	3,080.42
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.24	3,054.18
P02	Pup Joint		114.3	0.0	20.09		1	6.30	3,047.88
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	3,046.77
P02	Pup Joint		114.3	0.0	20.09		1	6.66	3,040.11
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.53	3,013.58
P02	Pup Joint		114.3	0.0	20.09		1	6.30	3,007.28
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	3,006.17
P02	Pup Joint		114.3	0.0	20.09		1	6.67	2,999.50
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.76	2,972.74
P02	Pup Joint		114.3	0.0	20.09		1	6.30	2,966.44
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	2,965.33
P02	Pup Joint		114.3	0.0	20.09		1	6.62	2,958.71
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.70	2,932.01
P02	Pup Joint		114.3	0.0	20.09		1	6.30	2,925.71
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	2,924.60
P02	Pup Joint		114.3	0.0	20.09		1	6.75	2,917.85
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.76	2,891.09
P02	Pup Joint		114.3	0.0	20.09		1	6.30	2,884.79
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	2,883.68
P02	Pup Joint		114.3	0.0	20.09		1	6.64	2,877.04
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.59	2,850.45
P02	Pup Joint		114.3	0.0	20.09		1	6.30	2,844.15
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	2,843.04
P02	Pup Joint		114.3	0.0	20.09		1	6.69	2,836.35
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.18	2,810.17
P02	Pup Joint		114.3	0.0	20.09		1	6.30	2,803.87
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	2,802.76
P02	Pup Joint		114.3	0.0	20.09		1	6.52	2,796.24
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.60	2,769.64
P02	Pup Joint		114.3	0.0	20.09		1	6.30	2,763.34
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	2,762.23
P02	Pup Joint		114.3	0.0	20.09		1	6.59	2,755.64
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.50	2,729.14
P02	Pup Joint		114.3	0.0	20.09		1	6.30	2,722.84
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	2,721.73
P02	Pup Joint		114.3	0.0	20.09		1	6.63	2,715.10
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.16	2,688.94
P02	Pup Joint		114.3	0.0	20.09		1	6.30	2,682.64
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	2,681.53
P02	Pup Joint		114.3	0.0	20.09		1	6.73	2,674.80
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.59	2,648.21
P02	Pup Joint		114.3	0.0	20.09		1	6.30	2,641.91
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	2,640.80
P02	Pup Joint		114.3	0.0	20.09		1	6.71	2,634.09
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.46	2,607.63
P02	Pup Joint		114.3	0.0	20.09		1	6.30	2,601.33
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	2,600.22
P02	Pup Joint		114.3	0.0	20.09		1	6.59	2,593.63
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.44	2,567.19
P02	Pup Joint		114.3	0.0	20.09		1	6.30	2,560.89
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	2,559.78
P02	Pup Joint		114.3	0.0	20.09		1	6.65	2,553.13
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	25.73	2,527.40
P02	Pup Joint		114.3	0.0	20.09		1	6.30	2,521.10
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	2,519.99
P02	Pup Joint		114.3	0.0	20.09		1	6.65	2,513.34
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.75	2,486.59
P02	Pup Joint		114.3	0.0	20.09		1	6.30	2,480.29
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	2,479.18
P02	Pup Joint		114.3	0.0	20.09		1	6.43	2,472.75
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.41	2,446.34
P02	Pup Joint		114.3	0.0	20.09		1	6.30	2,440.04
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	2,438.93
P02	Pup Joint		114.3	0.0	20.09		1	6.74	2,432.19
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.43	2,405.76
P02	Pup Joint		114.3	0.0	20.09		1	6.30	2,399.46
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	2,398.35
P02	Pup Joint		114.3	0.0	20.09		1	6.68	2,391.67
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.74	2,364.93

P02	Pup Joint		114.3	0.0	20.09		1	6.30	2,358.63
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	2,357.52
P02	Pup Joint		114.3	0.0	20.09		1	6.67	2,350.85
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.74	2,324.11
P02	Pup Joint		114.3	0.0	20.09		1	6.30	2,317.81
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	2,316.70
P02	Pup Joint		114.3	0.0	20.09		1	6.67	2,310.03
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.43	2,283.60
P02	Pup Joint		114.3	0.0	20.09		1	6.30	2,277.30
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	2,276.19
P02	Pup Joint		114.3	0.0	20.09		1	6.63	2,269.56
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.74	2,242.82
P02	Pup Joint		114.3	0.0	20.09		1	6.30	2,236.52
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	2,235.41
P02	Pup Joint		114.3	0.0	20.09		1	6.58	2,228.83
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.73	2,202.10
P02	Pup Joint		114.3	0.0	20.09		1	6.30	2,195.80
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	2,194.69
P02	Pup Joint		114.3	0.0	20.09		1	6.53	2,188.16
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.75	2,161.41
P02	Pup Joint		114.3	0.0	20.09		1	6.30	2,155.11
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	2,154.00
P02	Pup Joint		114.3	0.0	20.09		1	6.68	2,147.32
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.53	2,120.79
P02	Pup Joint		114.3	0.0	20.09		1	6.30	2,114.49
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	2,113.38
P02	Pup Joint		114.3	0.0	20.09		1	6.68	2,106.70
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.50	2,080.20
P02	Pup Joint		114.3	0.0	20.09		1	6.30	2,073.90
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	2,072.79
P02	Pup Joint		114.3	0.0	20.09		1	6.53	2,066.26
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.43	2,039.83
P02	Pup Joint		114.3	0.0	20.09		1	6.30	2,033.53
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	2,032.42
P02	Pup Joint		114.3	0.0	20.09		1	6.35	2,026.07
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.60	1,999.47
P02	Pup Joint		114.3	0.0	20.09		1	6.30	1,993.17
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	1,992.06
P02	Pup Joint		114.3	0.0	20.09		1	6.60	1,985.46
P05	Casing Joint	New	114.3	99.6	20.09	P-110	2	26.74	1,958.72
P02	Pup Joint		114.3	0.0	20.09		1	6.30	1,952.42
P07	Frac Sleeve - MultiCycle	New	114.3	0.0	20.09	P-110	1	1.11	1,951.31
P02	Pup Joint		114.3	0.0	20.09		1	6.76	1,944.55
P05	Casing Joint	New	114.3	99.6	20.09	P-110	28	370.55	1,574.00
P02	Pup Joint		114.3	0.0	20.09		1	1.85	1,572.15
P08	Liner Hanger Assembly - Primaset		114.3	0.0	0.00		1	1.93	1,570.22
P09	Receptacle - Polish bore receptical		0.0	0.0	0.00		1	3.64	1,566.58
P10	Other - Setting Tool		0.0	0.0	0.00		1	2.55	1,564.03

RUN DATE	JOINTS DELIVERED 0 / 0.00 m	JOINTS ON LEASE 0 / 0.00 m	GUIDE SHOE 0.27 m	FLOAT COLLAR 4,075.88 m	STICK UP -1,564.03 m	LANDED AT 4,078.00 m
----------	--------------------------------	-------------------------------	----------------------	----------------------------	-------------------------	-------------------------

CEMENT									TYPES 2
AMOUNT	TYPE	VOLUME	YIELD	% EXCESS	EST TOP	RETURNS	DENSITY		
	(t)	(m³)	(m³/t)	(%)	(m)	(m³)	(kg/m³)		
1.88	Scavenger	3.00	1.5950	0.00	0.00	3.00	1,400.00		
ADDITIVES									
0.2% AFA-7 + 0.4% TWR-4 + 0.5% Gel + 0.2% TDH-2 + 0.2% CFR-12	38.12	T.A.C-S	40.60	1.0650	60.00	0.00	9.00	1,600.00	
ADDITIVES									
0.2% AFA-7 + 0.4% TWR-4 + 0.5% Gel + 0.2% TDH-2 + 0.2% CFR-12									

										LANDED AT 1,566.55 m
TIE BACK										
CASING // RUN 2022-01-30										
CODE	DESCRIPTION	COND	OD (mm)	DRIFT (mm)	WEIGHT (kg/m)	GRADE	#	LENGTH (m)	TOP (mKB)	
T02	Receptacle		0.0	0.0	0.00		1	3.64	1,562.91	
T03	Other - LATCH		0.0	0.0	0.00		1	1.30	1,561.61	
T01	Casing Joint		114.3	96.4	20.09	P110	115	1,539.05	22.56	
T04	Pup Joint		114.3	96.4	20.09	P-110	3	8.00	14.56	
T01	Casing Joint		114.3	96.4	20.09	P110	1	13.39	1.17	
T04	Pup Joint		114.3	96.4	20.09	P-110	3	1.02	0.15	
T05	Other - Tubing hanger		0.0	0.0	0.00		1	0.15	0.00	
RUN DATE	JOINTS DELIVERED	JOINTS ON LEASE	GUIDE SHOE	FLOAT COLLAR	STICK UP	LANDED AT				
2022-01-30	122 / 1,637.58 m	122 / 1,637.58 m	-	1,566.55 m	0.00 m	1,566.55 m				

CEMENT							TYPES 0
There are currently no cement types indicated.							
CEMENT DATE	HOLE DEPTH	HOLE SIZE	MUD TYPE	MUD DENSITY	MUD VISCOSITY	MUD pH	
-	-	-	-	-	-	-	

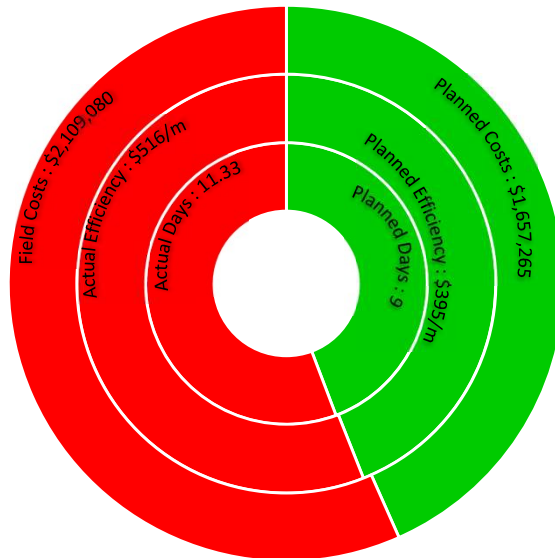
CASING BOWL				
BOWL TYPE		BOWL MAKE	SERIAL NUMBER	SLIP & SEAL
WORKING PRESSURE	WEIGHT LANDED	CASING SIZE	NOMINAL SIZE	
-	-	-	-	



Well KPIs

Operational

Planned Days:	9.0	
Actual Days:	11.3	25.9%
Planned Well Cost (\$):	1,657,265	
Final Field Cost (\$):	2,109,080	27.3%
Planned Drilling Cost Efficiency (\$/m):	395	
Actual Drilling Cost Efficiency (\$/m):	516	30.7%
Non-Productive Time (NPT):	0.00 hours	



<AFE: Yellow

<10% Over: Orange

>10% Over: Red

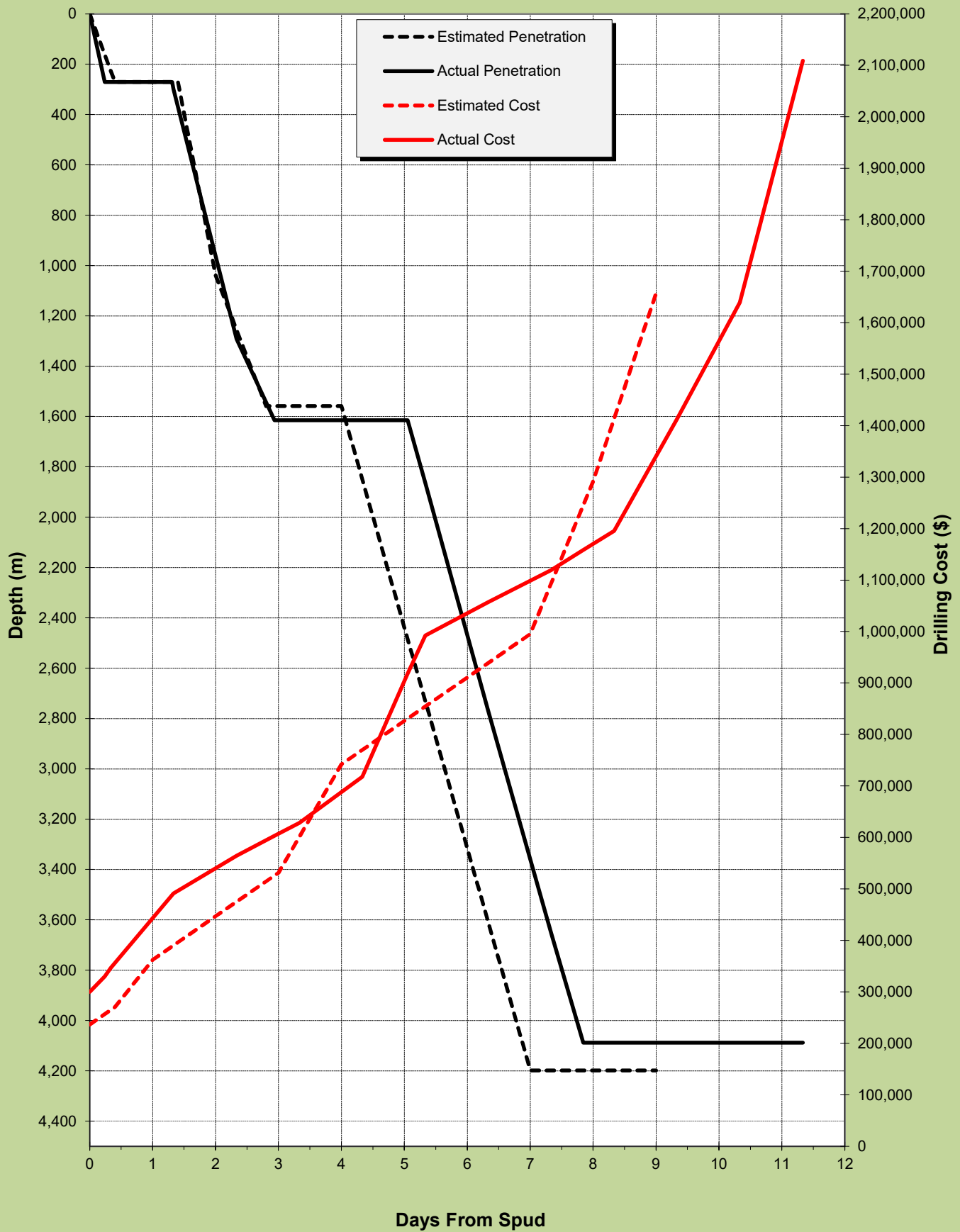
Actual Metrics

Planned Metrics

Safety

Lost Time Injuries (LTIs):	0
Restricted Work Cases / Injuries (RWCs):	0
Medical Treatment Cases / Injuries (MTCs):	0
TRC (Total Recordable Cases):	0

BLACKSPUR LEDUC-WB HZ 16-11-51-2W5 Drilling and Cost Curves





Section 2

Drilling Summaries & Daily Drilling Reports

WELL DATA									
NAME			LICENSE #	UWI	LOCATION				
BLACKSPUR HZ LEDUC-WB 16-11-51-2			0502001	100/16-11-051-02W5/00	LEDUC-WB AB, Canada				
COST CENTRE	WORKING INTEREST	WELL TYPE	PRIMARY PRODUCT	WELL STATUS	PAD NAME	PAD PHASE			
TBD	50%	Oil / Gas	Oil	Not Applicable	14-3-51-2W5 PAD	1			
COUNTRY		PROVINCE		FIELD	SUB-FIELD				
Canada		AB		LEDUC-WB					
EVENT DATA									
NAME		STATUS	DRILL STYLE	AFE NUMBER	AFE \$	FORECAST			
Drilling: Initial Drill		Rig Released	Single Rig	21DR0012	\$1,657,265.00				
GENERAL									
PHASE	CONTRACTOR		MOVE DATE	SPUD DATE	RELEASE DATE	MOVE > RELEASE	SPUD > RELEASE		
Drilling	Horizon #43		2022-01-17 07:00	2022-01-19 16:00	2022-01-30 23:59	13.71 days	11.33 days		
ELEVATIONS									
SURVEYED	CUT / FILL	GROUND	KB ELEVATION	KB > GROUND	CF ELEVATION	CF > GROUND			
742.30 m	-0.29 m	742.01 m	747.51 m	5.50 m	742.01 m	0.00 m			
BRIDGE PLUG									
MANUFACTURER		MODEL			PLUG DEPTH	BACK DEPTH			
					-	-			
FLUIDS									
WATER USED	MUD LOST	SOLIDS DISPOSAL			FLUIDS DISPOSAL				
911.00 m³	-								
LAND SPREAD LOCATION									
LATITUDE	LONGITUDE		LSD						
PERSONNEL									
TITLE	NAME			CONTACT					
Drilling Engineer	Derek Rae			403-701-0899					
Drilling Consultant	Mike Bowen			403-348-9127					
Drilling Consultant	Darren Burton			780-518-7767					
Drilling Manager	Nick Stanford			403-804-0296					
DRILLING PUMPS									
PUMP #1				PUMP #2					
MODEL	STROKE	LINER	OUTPUT	STYLE	MODEL	STROKE	LINER	OUTPUT	STYLE
Work Force 1300	279 mm	152 mm	0 l/st	Triplex	Work Force 1300	279 mm	152 mm	0 l/st	Triplex

WELL DATA					
NAME	LICENSE #	LOCATION	EVENT	AFE NUMBER	AFE AMOUNT
BLACKSPUR HZ LEDUC-WB 16-11-51-2	0502001	100/16-11-051-02W5/00	Initial Drill	21DR0012	\$1,657,265.00
NOTE: The DAILY COST column represents all costs including non-itemized, TOTAL DAILY represents only itemized costs for the day, and TOTAL is the running total of itemized costs only.					
CONSTRUCTION DAILY REPORTS					
DATE	DEPTH	DAILY COST	TOTAL DAILY	TOTAL	SUMMARY
2021-11-18	-	\$1,932.00	\$1,932.00	\$3,923.00	
2021-11-18	-	\$1,991.00	\$1,991.00	\$3,923.00	
2021-11-19	-	\$1,235.00	\$1,235.00	\$5,158.00	
2021-11-20	-	\$5,617.00	\$5,617.00	\$10,775.00	
2021-11-22	-	\$5,675.00	\$5,675.00	\$16,450.00	
2021-11-23	-	\$5,540.00	\$5,540.00	\$21,990.00	
2021-11-24	-	\$5,565.00	\$5,565.00	\$27,555.00	
2021-11-25	-	\$4,355.00	\$4,355.00	\$31,910.00	
2021-11-26	-	\$6,545.00	\$6,545.00	\$38,455.00	D8N, D6R, 290 Hoe, 872 Grader work on road/ Repacing topsoil in ditches, and pushing down hills to low areas
2021-11-27	-	\$7,000.00	\$7,000.00	\$45,455.00	Continue to work on road and lease
2021-11-28	-	\$7,835.00	\$7,835.00	\$53,290.00	Work on road, Level lease
2021-11-29	-	\$6,410.00	\$6,410.00	\$59,700.00	
2021-11-30	-	\$7,320.00	\$7,320.00	\$67,020.00	Haul gravel on road grade road
2022-01-08	-	\$1,015.00	\$1,015.00	\$68,035.00	
2022-01-09	-	\$11,825.00	\$11,825.00	\$79,860.00	
2022-01-10	-	\$3,500.00	\$3,500.00	\$83,360.00	
2022-01-15	-	\$495.00	\$495.00	\$83,855.00	
2022-01-31	-	\$5,320.00	\$5,320.00	\$2,099,100.03	
DRILLING DAILY REPORTS					
DATE	DEPTH	DAILY COST	TOTAL DAILY	TOTAL	SUMMARY
2022-01-17	0.00m	\$141,352.50	\$141,352.50	\$225,207.50	Haul Rig & Rental loads to location, spot matting, sub & derrick, shut down & wait on daylight to spot remaining loads. Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of rig move to rig up & driving in winter conditions. The rig is running well with no safety or environmental issues to report.
2022-01-18	0.00m	\$48,785.17	\$48,785.17	\$273,992.67	Continue to haul Rig & Rental loads to location, spot loads & rig up to spud. Hook up steam, water & hydraulic lines, raise derrick. (Trucks off location @ 17:45). Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of rig move to rig up & driving in winter conditions. The rig is running well with no safety or environmental issues to report.
2022-01-19	271.00m	\$66,916.00	\$66,916.00	\$340,908.67	Continue to rig up to spud. Rig in mud tanks, pumps, pick up & rig in the top drive, weld on conductor barrel, de-icing equipment, rig up balls and elevators, tongs, flare, and degasser lines to manifold shack, set up pipe arms, load on BHA/strap, rig in mud tanks/fill mud tanks. Hold pre-spud safety meetings with all personnel on location. Spud @ 16:00, drill 311mm surface hole from 20mKB - 271mKB, (Trace amount of coal @ 60m)(TD @ 21:45), condition mud & circulate hole clean, back ream out of hole. AER notification ID 1040129. Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations rigging up & drilling 311mm surface hole, tripping & handling BHA. The rig is running well with no safety or environmental issues to report.
2022-01-20	300.00m	\$151,791.64	\$151,791.64	\$492,700.31	Continue to back ream out of the hole, Lay down DCs & Directional Assembly. Rig in powertongs & run 24Jts, 244.5mm, 53.7Kg/m, J55 Casing. On bottom @ 06:15. Condition mud & circ hole clean, Rig in Trican & cement casing, Pump 3m³ water, pressure test lines. Pump 15t (14.09m³)(80% XS) of TSC 1700-S Bulk Cement (1700kg/m³) with 0.4% TLA, 0.4% AFA-7, 2% Calcium Chloride. Drop plug & displace with 10.43m³ of freshwater, bump plug 5Mpa over circulation pressure, hold for 5 min., bleed off & check floats pressure test the casing to 1.4MPa low & 14MPa high for 11min each. Plug down @ 07:24, (4.5m³ good cement returns). WOC, Cut conductor & Csg, weld on bowl, nipple up & pressure test well control

					<p>equipment, clean tanks, wax rig & mud tanks. Make up directional assembly with 222mm Halliburton GTD54RM on 2.12deg FXD 7/8Lobe, 5 Stage motor, RIH, drill out float & shoe @ 23:25.</p> <p>Drill ahead 222mm vertical section from 271mKB - 300mKB</p> <p>Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of running csg, cementing, nipple up, pressure testing & handling BHA. The rig is running well with no safety or environmental issues to report.</p> <p>Planned KOP @ 1013mKB, Planned pump tangent @ 1433mKB - 1463mKB, Planned Heel @ 1575mKB, Planned TD 4204mKB.</p>
2022-01-21	1,292.00m	\$83,546.49	\$83,546.49	\$576,246.80	<p>No safety concerns or environmental issues to report.</p> <p>Drill 159mm Vertical section from 300mKB mKB - 1292mKB,</p> <p>Rotating ROP - 100m/hr, Sliding ROP - 60m/hr, Silicate content @ 12%, Vis- 45, Mud Wt - 1050Kg/m, Gamma - 87API, Gas - 144units.</p> <p>KOP @ 1007mKB, Mud up @ 1100mKB.</p> <p>Build section last 24 hours 1007.0-1292m 280m drilled Slid 196.9m (77%) Rot 83.1m (23%)</p> <p>Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of Drilling ahead, connections & handling chemicals. The rig is running well with no safety or environmental issues to report.</p>
2022-01-22	1,615.00m	\$76,026.50	\$76,026.50	\$652,273.30	<p>Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of Drilling ahead, connections & handling chemicals. The rig is running well with no safety or environmental issues to report.</p> <p>Drill 159mm Build section from 1292mKB mKB - 1615mKB (Heel @ 14:30) Extrap. to Bit: 1615mKB, Inc: 85.4deg, Azm: 87.2deg, TVD: 1367.9m</p> <p>Circulate hole clean, back ream to KOP @ 1007mKB, Circ hole clean, POOH to surface csg shoe @ 271mKB. RIH to 872mKB. (Clean bridges @ 705m,810m,865m)</p> <p>Rotating ROP - 60m/hr, Sliding ROP - 30m/hr, (Sliding: 35%, Rotating: 65%)</p> <p>Vis- 76, Mud Wt - 1060Kg/m, Gamma - 75API, Gas - 165units.</p> <p>Drill into the top of Mannville formation @ 50.2deg Inc. Pump Tangent: 1431mKB - 1463mKB</p>
2022-01-23	1,615.00m	\$86,529.60	\$86,529.60	\$738,802.90	<p>Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of Tripping handling BHA & running casing. The rig is running well with no safety or environmental issues to report.</p> <p>Continue to RIH from 872mKB - 1615mKB, (on bottom @ 02:30). Clean bridges @ 1030m,1366m. Condition mud & circulate hole clean, POOH from 177.8mm Csg. lay down directional assembly. Rig in powertongs & eTorque & run 131Jts, 177.8mm, 34.2Kg/m, P110, Geoconn Casing, circulate bottoms up @ 996mKB, run in casing to 1320mKB, Circulate casing in from 1320mKB - 1615mKB (on bottom @ 22:15), Condition mud & circulate hole clean.</p>
2022-01-24	1,865.00m	\$258,972.39	\$258,972.39	\$997,775.29	<p>Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of Tripping handling BHA & drilling 159mm main hole. The rig is running well with no safety or environmental issues to report.</p> <p>Held safety meeting with cementers, Cement with Trican. Pump 1m³ Optimum Flush, Pressure test to 36MPa, Pump 2m³ Optimum Flush at 1160kg/m³ containing 5Kg/m³Optimum Flush + 36L/m³ MW-2W Mud Wash. Pump 3m³ (1.42t) Scavenger, Titanium 1400-S @ 1300Kg/m³ with 2% OGC-60 + 4% AFA-7. Pump 23.2m³ (14.57t) lead cement Titanium 1400-S @ 1400Kg/m³ with 2% OGC-60 + 4% AFA-7. Pump 17.04m³ tail cement at 1600 kg/m³ (16t) T.A.C.-S with 0.2% AFA-7 + 0.4% TWR-4 + 0.5% Gel + 0.2% TDH-2 + 0.2% CFR-12. Drop plug. Displace with 32.86m³ fresh water, Bump plug @ 5 MPa over circulating pressure and hold for 5 minutes. Bleed back & check floats, floats held with 200L back. 9m³ good cement returns to surface. Plug down @ 01:45. Pressure test the casing to 1.4MPa low & 14MPa high for 11min each.</p> <p>Flush BOP, Nipple down & lift stack, install slips & seal, set slips @ 40DaN, cut casing, layout spools, install Tubing Head & X/O spool, nipple up, Pressure test breaks, install wear bushing, pick up directional assembly with 159mm Reed TKC63-B1, on 6/7 Lobe, 6.4Stg Adj motor set @ 1.83deg, MWD Tool, Typhoon reamer, Jars and ball drop agitator 700 meters above the BHA. RIH, Slip & Cut drill line, drill out float & shoe @ 17:15, displace well to Polymer mud.</p> <p>Drill ahead 159mm lateral section as per Phoenix directional plan # 5 from 1615mKB - 1865mKB.</p> <p>Rotating ROP - 140m/hr, Sliding ROP - 50m/hr, Vis- 38, Mud Wt - 1020Kg/m, WL - 8, Gamma - 78API, Gas - 76units.</p>
2022-01-25	2,770.00m	\$64,380.49	\$64,380.49	\$1,062,155.78	<p>Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of drilling 159mm main hole. The rig is running well with no safety or environmental issues to report.</p> <p>Drill 159mm Lateral section from 1865mKB - 2770mKB</p> <p>Rotating ROP - 120m/hr, Sliding ROP - 45m/hr,</p> <p>Vis- 39, Mud Wt - 1100Kg/m, WL - 8, Gamma - 78API, Gas - 263units.</p> <p>Engage agitator @ 2500mKB - (2000Kpa increase in pump pressure).</p>
2022-01-26	3,651.00m	\$81,965.72	\$81,965.72	\$1,144,121.50	<p>Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of drilling 159mm main hole. The rig is running well with no safety or environmental issues to report.</p> <p>Drill 159mm Lateral section from 2770mKB - 3651mKB</p> <p>Rotating ROP - 110m/hr, Sliding ROP - 35m/hr,</p> <p>Vis- 39, Mud Wt - 1080Kg/m, Gamma - 71API, Gas - 585units.</p>
2022-01-27	4,088.00m	\$56,342.25	\$56,342.25	\$1,200,463.75	<p>Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of drilling 159mm main hole & tripping. The rig is running well with no safety or environmental issues to report.</p> <p>Drill 159mm Lateral section from 3651mKB - 4088mKB (TD @ 12:15). Extrap to bit @ 4088mKB, Inc: 89.1deg, Azm: 48.7deg, TVD: 1359.57m</p> <p>Rotating ROP - 90m/hr, Sliding ROP - 30m/hr, Vis- 39, Mud Wt - 1070Kg/m, Gamma - 58API, Gas - 1800units.</p> <p>Condition mud & circulate hole clean, Wipertrip to intermediate csg shoe, (Spot lube pill with Graphite, Elixir Lube & Beads in lateral & up to KOP). RIH, ream & clean any tight spots & doglegs 4deg & greater.</p>
2022-01-28	4,088.00m	\$199,204.37	\$199,204.37	\$1,399,668.12	<p>Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of tripping. The rig is running well with no safety or environmental issues to report.</p>

Continue to RIH, Begin washing down stands @ 3050mKB, pipe hanging up from hole drag, on bottom @ 08:30, Condition mud & circulate hole clean. spot lube pill, (30m³ that will cover lateral section & up to KOP with 3% Elixir + 15Kg/m³ Graphite + 15Kg/m³ Sunburst Beads + 3Kg/m³ Walnut M) POOH, rack back 35HWDP Stands & 50DP Stands (1600m) lay down rest of DP. Slip & cut drill line, lay down directional assembly.

2022-01-29	4,088.00m	\$224,772.81	\$224,772.81	\$1,624,440.93	<p>Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of tripping, running csg & cementing. The rig is running well with no safety or environmental issues to report.</p> <p>Finish laying down directional assembly, Rig in Powertongs & eTorque & run 133Jts 114.3mm, 20.09Kg/m, GBCD Csg with Low friction disrupter bands, 2 Interra Toe Sleeves & 52 Frac Sleeves, pick up liner hanger & RIH with 47Stds DP & 35Stds HWDP. Land liner @ 4078mKB, (On bottom @ 15:00) burst Aerostst sub @ 9900Kpa, bleed & pump 18.5m³ to fill liner. Circulate bottoms up, drop ball and pump 2.0m³, let ball gravity drop for 15mins, pump 200l/min to land ball, press. up to 16.0Mpa, bleed down to 5.0Mpa, slack off test to 3000dan compression, bleed off, rotate drill string 4 times press. up to 28.7Mpa to shear setting ball through setting sub. Rig in cement head and Cement with Trican. Pump 1m³ Water, Pressure test to 45 MPa, Pump 2.5m³ Optimum Flush at 1160kg/m³ containing 5Kg/m³ Optimum Flush + 36L/m³ MW-2W Mud Wash. Pump 3m³ (1.88t) Scavenger T.A.C. Bulk Cement with 0.2% AFA-7 + 0.4% TWR-4 + 0.5% Gel + 0.2% TDH-2 + 0.2% CFR-12. Pump 40.6m³ cement at 1600 kg/m³ (38.12t) (60% XS) T.A.C.-S with 0.2% AFA-7 + 0.4% TWR-4 + 0.5% Gel + 0.2% TDH-2 + 0.2% CFR-12. Drop plug. Displace w/ 19.5m³ Retarder Water + 9.5m³ Clay/Inhib Water Bump plug @ 7 MPa over circulating pressure and hold for 5 minutes. Bleed back & check floats, floats held with 300L back. Pull out of Liner Hanger & circulate bottoms up with Clay/Inhib Water. 9m³ good cement returns to surface. Plug down @ 20:20. Close Annular & pressure test Hanger & Liner to 14MPa for 11min. Rig out Trican & LDDP.</p>
2022-01-30	4,088.00m	\$425,226.58	\$425,226.58	\$2,049,667.51	<p>Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of tripping, running csg & tear out. The rig is running well with no safety or environmental issues to report.</p> <p>Finish laying down DP, Pull wear bushing, rig in powertongs & eTorque & run 117Jts, 114.3mm, 20.09Kg/m, BTC Frac Tie Back String, unlatch & space out. Attempt to pressure test tubing hanger, Failed, change out seals on Dognut & pressure test to 14Mpa for 10min. Nipple down & install wellhead, pressure test, clean tanks, haul mainhole mud to disposal, rig down topdrive & tear out. Rig Released @ 23:59, Jan. 30/22</p>
2022-01-31	4,088.00m	\$44,112.52	\$44,112.52	\$2,099,100.03	<p>Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of cleaning, tearing out rentals & rig. No safety or environmental issues to report.</p> <p>Clean & tear out rig & rentals. Prepare for highway move.</p>

LOCATION DATA							
NAME		LICENSE #	UWI	EVENT	AFE #	AFE \$	
BLACKSPUR HZ LEDUC-WB 16-11-51-2		0502001	100/16-11-051-02W5/00	Initial Drill	21DR0012	\$1,657,265.00	
DRILLING DATA							
EVENT	STAGE	MOVE DATE	SPUD DATE	RELEASE DATE	RIG		
Initial Drill	DRILLING	2022-01-17	2022-01-19	2022-01-30	Horizon #43		
SURVEYED	CUT / FILL	KB > GROUND	CF > GROUND	GROUND	KB ELEVATION	CF ELEVATION	
742.30 m	-0.29 m	5.50 m	0.00 m	742.01 m	747.51 m	742.01 m	
DAILY REPORT DETAILS							
REPORT DATE	DEPTH	DRILLING TIME	PROGRESS	AVG ROP	MAN HOURS	CUM. HOURS	NON-PRODUCTIVE
2022-01-31	4,088.00 m	0.00 hr	0.00 m	0.00 m/hr	112.00 hr	1,697.00 hr	0.00 hr
MUD		RENTALS		COSTS			
MUD	CUM. MUD	RENTALS	CUM. RENTALS	DRILLING DAILY	DRILLING TOTAL	EVENT DAILY	EVENT TOTAL
\$0.00	\$122,538.96	\$1,145.00	\$105,204.50	\$44,112.52	\$2,009,925.03	\$49,432.52	\$2,099,100.03
DAILY OPERATIONS							
MORNING OPERATIONS No safety concerns or environmental issues to report. Wait on daylight f/ trucks to load our remaining rentals & Horizon 43 Final Report.							
DAILY OPERATIONAL SUMMARY Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of cleaning, tearing out rentals & rig. No safety or environmental issues to report. Clean & tear out rig & rentals. Prepare for highway move.							
DAILY FORECAST Wait on daylight & load out rig loads & rentals.							
TIMELOG					WEATHER		
FROM	TO	DUR	NPT CODE	DETAILS	TIME	TEMP	CONDITIONS
00:00	06:30	6.5 h	22	Tear down rig and prep for move	06:00	-9 °C	BLOWING SNOW
06:30	06:45	0.25 h	21	Safety meeting crew hand over	WIND STRENGTH		ROAD CONDITION
06:45	08:00	1.25 h	22	Tear down rig and prep for move	UP TO 29 KM/H		POOR
08:00	16:00	8.0 h	22	Tear down rig & prep for move	PERSONNEL		
16:00	19:00	3.0 h	22	Tear down & prep for move	DRILLING ENGINEER - On Site		
19:00	00:00	5.0 h	23B	Wait on daylight	Derek Rae 403-701-0899		
					DRILLING CONSULTANT - On Site		
					Mike Bowen 403-348-9127		
					DRILLING CONSULTANT - On Site		
					Darren Burton 780-518-7767		
					DRILLING MANAGER - On Site		
					Nick Stanford 403-804-0296		
					PUMPS		
Pump #1					Pump #2		
Model	Work Force	Model	Work Force		Model	Work Force	
	1300		1300				
Duplex	TRIPLEX	Duplex	TRIPLEX				
SPM		SPM					
Pressure	-	Pressure	-				
Hours Run	-	Hours Run	-				
Liner Size	-	Liner Size	-				

LOCATION DATA							
NAME	LICENSE #	UWI	EVENT	AFE #	AFE \$		
BLACKSPUR HZ LEDUC-WB 16-11-51-2	0502001	100/16-11-051-02W5/00	Initial Drill	21DR0012	\$1,657,265.00		
DRILLING DATA							
EVENT	STAGE	MOVE DATE	SPUD DATE	RELEASE DATE	RIG		
Initial Drill	DRILLING	2022-01-17	2022-01-19	2022-01-30	Horizon #43		
SURVEYED	CUT / FILL	KB > GROUND	CF > GROUND	GROUND	KB ELEVATION	CF ELEVATION	
742.30 m	-0.29 m	5.50 m	0.00 m	742.01 m	747.51 m	742.01 m	
DAILY REPORT DETAILS							
REPORT DATE	DEPTH	DRILLING TIME	PROGRESS	AVG ROP	MAN HOURS	CUM. HOURS	NON-PRODUCTIVE
2022-01-30	4,088.00 m	0.00 hr	0.00 m	0.00 m/hr	132.00 hr	1,585.00 hr	0.00 hr
MUD		RENTALS	COSTS				
MUD	CUM. MUD	RENTALS	CUM. RENTALS	DRILLING DAILY	DRILLING TOTAL	EVENT DAILY	EVENT TOTAL
\$0.00	\$122,538.96	\$6,916.50	\$104,059.50	\$425,226.58	\$1,965,812.51	\$425,226.58	\$2,049,667.51
DAILY OPERATIONS							
MORNING OPERATIONS No safety concerns or environmental issues to report. Continue to tear down rig, clean rentals. Rig Released @ 23:59, Jan. 30/22							
DAILY OPERATIONAL SUMMARY Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of tripping, running csg & tear out. The rig is running well with no safety or environmental issues to report. Finish laying down DP, Pull wear bushing, rig in powertongs & eTorque & run 117Jts, 114.3mm, 20.09Kg/m, BTC Frac Tie Back String , unlatch & space out. Attempt to pressure test tubing hanger, Failed, change out seals on Dognut & pressure test to 14Mpa for 10min. Nipple down & install wellhead, pressure test, clean tanks, haul mainhole mud to disposal, rig down topdrive & tear out. Rig Released @ 23:59, Jan. 30/22							
DAILY FORECAST Continue to tear down rig, clean rentals. Haul back floc tanks, 400bbl tanks, cement bins, directional tools, extra casing & mix off bins.							
TIMELOG					WEATHER		
FROM	TO	DUR	NPT CODE	DETAILS	TIME	TEMP	CONDITIONS
00:00	03:15	3.25 h	6F	Lay down drill string	06:00	-1 °C	PARTLY CLOUDY
03:15	03:30	0.25 h	25	Pull wear bushing	WIND STRENGTH		ROAD CONDITION
03:30	04:00	0.5 h	12A	Rig up to run tie back string	CALM		GOOD
04:00	04:15	0.25 h	21	Safety meeting with tonghand	PERSONNEL		
04:15	06:30	2.25 h	12	Run tie back string	DRILLING ENGINEER - On Site Derek Rae 403-701-0899		
06:30	06:45	0.25 h	21	crew change handover	DRILLING CONSULTANT - On Site Mike Bowen 403-348-9127		
06:45	08:00	1.25 h	12B	Run tieback string	DRILLING CONSULTANT - On Site Darren Burton 780-518-7767		
08:00	09:15	1.25 h	12B	Running tie back	DRILLING MANAGER - On Site Nick Stanford 403-804-0296		
09:15	11:30	2.25 h	12B	unlatch and space out	FUEL USE		
11:30	12:00	0.5 h	15D	attempt to pressure test tubing hanger	FUEL	USAGE	
12:00	15:45	3.75 h	12B	unlatch to change out hanger seals , wait on new tubing hanger seals	Marked Diesel	3,680.0 L	
15:45	16:00	0.25 h	15A	Pressure test hanger at 14mpa for 10 mins	PUMPS		
16:00	17:30	1.5 h	14B	Nipple down BOPs	Pump #1	Pump #2	
17:30	17:45	0.25 h	14E	Install wellhead	Model	Work Force	Model
17:45	18:30	0.75 h	22B	Rig down top drive	1300	1300	
18:30	18:45	0.25 h	21	crew hand over	Duplex	TRIPLEX	Duplex
18:45	22:00	3.25 h	22B	Rig down top drive	SPM		SPM
22:00	00:00	2.0 h	22	Tear down. Rig released @ 23:59, Jan. 30/22	Pressure	-	Pressure
					Hours Run	-	Hours Run
					Liner Size	-	Liner Size

LOCATION DATA							
NAME		LICENSE #	UWI	EVENT	AFE #	AFE \$	
BLACKSPUR HZ LEDUC-WB 16-11-51-2		0502001	100/16-11-051-02W5/00	Initial Drill	21DR0012	\$1,657,265.00	
DRILLING DATA							
EVENT	STAGE	MOVE DATE	SPUD DATE	RELEASE DATE	RIG		
Initial Drill	DRILLING	2022-01-17	2022-01-19	2022-01-30	Horizon #43		
SURVEYED	CUT / FILL	KB > GROUND	CF > GROUND	GROUND	KB ELEVATION	CF ELEVATION	
742.30 m	-0.29 m	5.50 m	0.00 m	742.01 m	747.51 m	742.01 m	
DAILY REPORT DETAILS							
REPORT DATE	DEPTH	DRILLING TIME	PROGRESS	AVG ROP	MAN HOURS	CUM. HOURS	NON-PRODUCTIVE
2022-01-29	4,088.00 m	0.00 hr	0.00 m	0.00 m/hr	132.00 hr	1,453.00 hr	0.00 hr
MUD		RENTALS	COSTS				
MUD	CUM. MUD	RENTALS	CUM. RENTALS	DRILLING DAILY	DRILLING TOTAL	EVENT DAILY	EVENT TOTAL
\$0.00	\$122,538.96	\$6,916.50	\$97,143.00	\$224,772.81	\$1,540,585.93	\$224,772.81	\$1,624,440.93
DAILY OPERATIONS							
MORNING OPERATIONS							
No safety concerns or environmental issues to report. Finish laying down DP, Pull wear bushing, rig in powertongs & eTorque & run 117Jts, 114.3mm, 20.09Kg/m, BTC Frac Tie Back String. Currently @ 600mKB.							
DAILY OPERATIONAL SUMMARY							
Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of tripping, running csg & cementing. The rig is running well with no safety or environmental issues to report. Finish laying down directional assembly, Rig in Powertongs & eTorque & run 133Jts 114.3mm, 20.09Kg/m, GBCD Csg with Low friction disrupter bands, 2 Interra Toe Sleeves & 52 Frac Sleeves, pick up liner hanger & RIH with 47Stds DP & 35Stds HWDP. Land liner @ 4078mKB, (On bottom @ 15:00) burst Aerostst sub @ 9900Kpa, bleed & pump 18.5m³ to fill liner. Circulate bottoms up, drop ball and pump 2.0m³, let ball gravity drop for 15mins, pump 200l/min to land ball , press. up to 16.0Mpa, bleed down to 5.0Mpa, slack off test to 30000dan compression, bleed off, rotate drill string 4 times press. up to 28.7Mpa to shear setting ball through setting sub. Rig in cement head and Cement with Trican. Pump 1m3 Water, Pressure test to 45 MPa, Pump 2.5m3 Optimum Flush at 1160kg/m3 containing 5Kg/m³ Optimum Flush + 36L/m³ MW-2W Mud Wash. Pump 3m³ (1.88t) Scavenger T.A.C. Bulk Cement with 0.2% AFA-7 + 0.4% TWR-4 + 0.5% Gel + 0.2% TDH-2 + 0.2% CFR-12. Pump 40.6m³ cement at 1600 kg/m³ (38.12t) (60% XS) T.A.C.-S with 0.2% AFA-7 + 0.4% TWR-4 + 0.5% Gel + 0.2% TDH-2 + 0.2% CFR-12. Drop plug. Displace w/ 19.5m³ Retarder Water + 9.5m³ Clay/Inhib Water Bump plug @ 7 MPa over circulating pressure and hold for 5 minutes. Bleed back & check floats, floats held with 300L back. Pull out of Liner Hanger & circulate bottoms up with Clay/Inhib Water. 9m3 good cement returns to surface. Plug down @ 20:20. Close Annular & pressure test Hanger & Liner to 14MPa for 11min. Rig out Trican & LDDP.							
DAILY FORECAST							
Run Tie Back to top of liner hanger, space out & land, pressure test, nipple down, install wellhead, clean tanks, tear out.							
TIMELOG					WEATHER		
FROM TO	DUR	NPT	CODE	DETAILS	TIME	TEMP	CONDITIONS
00:00 00:15	0.25 h	20		Break bit and lay down motor, hole fill calc. 14.87m³, meas. 15.29m³, diff. + 0.42m³.	06:00	1 °C	OVERCAST
00:15 01:00	0.75 h	12A		Rig up to run liner (crew working short handed)	WIND STRENGTH		ROAD CONDITION
01:00 01:30	0.5 h	21		Safety meeting with tool hands and tonghand	CALM		GOOD
01:30 06:30	5.0 h	12B		Run liner (crew working short handed)	PERSONNEL		
06:30 06:45	0.25 h	21		crew change handover	DRILLING ENGINEER - On Site		
06:45 08:00	1.25 h	12B		Run liner	Derek Rae 403-701-0899		
08:00 10:00	2.0 h	12B		Run casing	DRILLING CONSULTANT - On Site		
10:00 15:00	5.0 h	12B		Run casing , run in drill pipe on top of liner	Mike Bowen 403-348-9127		
15:00 15:45	0.75 h	12B		press. up to 9900kpa to burst aerostat , bleed and pump 18.5m3 to fill liner	DRILLING CONSULTANT - On Site		
15:45 16:00	0.25 h	5D		Circulate bottoms up	Darren Burton 780-518-7767		
16:00 17:15	1.25 h	5D		continue circulate bottoms up	DRILLING MANAGER - On Site		
17:15 17:30	0.25 h	21		safety meeting with trican, packer plus	Nick Stanford 403-804-0296		
17:30 18:30	1.0 h	25		drop ball and pump 2.0m³, let ball gravity drop for 15mins, pump 200l/min to land ball , press. up to 16.0mpa,bleed down to 5.0mpa, slack off test to 30000dan compression, bleed off, rotate drill string 4 times , press. up to 28.7mpa to shear setting ball	FUEL USE		
18:30 18:45	0.25 h	21		Crew hand over	FUEL		
18:45 20:30	1.75 h	12C		Rig in cement head and Cement with Trican. Pump 1m³ Water, Pressure test to 45 MPa, Pump 2.5m³ Optimum Flush at 1160kg/m³ containing 5Kg/m³ Optimum Flush + 36L/m³ MW-2W Mud Wash. Pump 3m³ (1.88t) Scavenger T.A.C. Bulk Cement with 0.2% AFA-7 + 0.4% TWR-4 + 0.5% Gel + 0.2% TDH-2 + 0.2% CFR-12. Pump 40.6m³ cement at 1600 kg/m³ (38.12t) (60% XS) T.A.C.-S with 0.2% AFA-7 + 0.4% TWR-4 + 0.5% Gel + 0.2% TDH-2 + 0.2% CFR-12. Drop plug. Displace with 19.5m³ Retarder Water + 9.5m³ Clay/Inhib Water Bump plug @ 7 MPa over circulating pressure and hold for 5 minutes. Bleed back & check floats, floats held with 300L back. Pull out of Liner Hanger & circulate bottoms up. 9m³ good cement returns to surface. Plug down @ 20:20. Pressure test Hanger & Liner to 14MPa high for 11min each	Marked Diesel 3,460.0 L		
20:30 20:45	0.25 h	25		Release setting dogs on hanger, pull of TBR	USAGE		
20:45 21:00	0.25 h	5C		Circulate bottom up with 16m³ of clay/inhibitor water	PUMPS		
21:00 21:15	0.25 h	25		pressure test wellbore to 14000Kpa for 11mins	Pump #1	Work Force	Pump #2
21:15 21:30	0.25 h	12A		Rig out cementers	Model	1300	Model
21:30 00:00	2.5 h	6F		Lay down drill string	Duplex	TRIPLEX	Duplex
					SPM	62	SPM
					Pressure	8,500 kpa	Pressure
					Hours Run	4.0 hr	Hours Run
					Liner Size	152.0 mm	Liner Size

LOCATION DATA							
NAME		LICENSE #	UWI	EVENT	AFE #	AFE \$	
BLACKSPUR HZ LEDUC-WB 16-11-51-2		0502001	100/16-11-051-02W5/00	Initial Drill	21DR0012	\$1,657,265.00	
DRILLING DATA							
EVENT	STAGE	MOVE DATE	SPUD DATE	RELEASE DATE	RIG		
Initial Drill	DRILLING	2022-01-17	2022-01-19	2022-01-30	Horizon #43		
SURVEYED	CUT / FILL	KB > GROUND	CF > GROUND	GROUND	KB ELEVATION	CF ELEVATION	
742.30 m	-0.29 m	5.50 m	0.00 m	742.01 m	747.51 m	742.01 m	
DAILY REPORT DETAILS							
REPORT DATE	DEPTH	DRILLING TIME	PROGRESS	AVG ROP	MAN HOURS	CUM. HOURS	NON-PRODUCTIVE
2022-01-28	4,088.00 m	0.00 hr	0.00 m	0.00 m/hr	132.00 hr	1,321.00 hr	0.00 hr
MUD		RENTALS		COSTS			
MUD	CUM. MUD	RENTALS	CUM. RENTALS	DRILLING DAILY	DRILLING TOTAL	EVENT DAILY	EVENT TOTAL
\$33,840.77	\$122,538.96	\$10,011.50	\$90,226.50	\$199,204.37	\$1,315,813.12	\$199,204.37	\$1,399,668.12
DAILY OPERATIONS							
MORNING OPERATIONS							
No safety concerns or environmental issues to report. Finish laying down directional assembly, Rig in Powertongs & eTorque & run 133Jts 114.3mm Csg with Low friction disrupter bands, 2 Interra Toe Sleeves & 52 Frac Sleeves. Currently @ 1200mKB							
DAILY OPERATIONAL SUMMARY							
Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of tripping. The rig is running well with no safety or environmental issues to report. Continue to RIH, Begin washing down stands @ 3050mKB, pipe hanging up from hole drag, on bottom @ 08:30, Condition mud & circulate hole clean. spot lube pill,(30m³ that will cover lateral section & up to KOP with 3% Elixir + 15Kg/m³ Graphite + 15Kg/m³ Sunburst Beads + 3Kg/m³ Walnut M) POOH, rack back 35HWDP Stands & 50DP Stands (1600m) lay down rest of DP. Slip & cut drill line, lay down directional assembly.							
DAILY FORECAST							
Run Csg to bottom, burst AeroSTAT Flootation Sub, circulate out air & circulate the hole clean, set slips on Liner Hanger, back off, screw back in to liner, cement with Trican, circulate out excess cement, inflate packer & pressure test hanger, POOH sideways, pick up & run Tie-In string.							
TIMELOG					WEATHER		
FROM	TO	DUR	NPT CODE	DETAILS	TIME	TEMP	CONDITIONS
00:00	01:30	1.5 h	6A	Trip in hole TO 2900m	06:00	-4 °C	OVERCAST
01:30	06:30	5.0 h	3	Reaming from 2900m to 3757m	WIND STRENGTH		ROAD CONDITION
06:30	06:45	0.25 h	21	crew change meeting	CALM		GOOD
06:45	07:45	1.0 h	3	continue to ream in hole	PERSONNEL		
07:45	08:00	0.25 h	7	Rig Service/ function HCR 2 secs to close	DRILLING ENGINEER - On Site		
08:00	08:30	0.5 h	3	reaming from 4004-4088m	Derek Rae 403-701-0899		
08:30	12:00	3.5 h	5D	Circulate and Condition mud , pumped high vis sweep , spotted lube pill	DRILLING CONSULTANT - On Site		
12:00	15:15	3.25 h	6B	Trip out of hole to run liner, 10 min flow checks @ 2525M racked 1600m of pipe in derrick	Mike Bowen 403-348-9127		
15:15	16:00	0.75 h	6F	Lay down drill pipe TO 2336m	DRILLING CONSULTANT - On Site		
16:00	18:30	2.5 h	6F	Lay down drill pipe TO 1424m , flow check @ 2036m	Darren Burton 780-518-7767		
18:30	18:45	0.25 h	21	crew hand over , discuss weekly operations and improvement meeting talked about what we has a group can do too make sure we all go home @ end of day safe and sound	DRILLING MANAGER - On Site		
18:45	22:15	3.5 h	6F	Lay down drill pipe flow check @ (crew working short handed, floorhand decided not to come too work)	Nick Stanford 403-804-0296		
22:15	22:30	0.25 h	21D	Pre-job safety prio to slip & cut	MUD ADDITIVES		
22:30	23:00	0.5 h	9A	Slip/Cut drilling line 11.82M total MJ 12622	PRODUCT	AMOUNT	UNIT
23:00	23:15	0.25 h	6F	Lay down drill pipe	ELIXIR	12	bbl
23:15	23:30	0.25 h	21D	Pre-job safety prio to laying down directional tools	SUNBURST DP	50	sacks
23:30	00:00	0.5 h	20D	Handle directional tools lay out	GRAPHITE	49	pallet
					BARITE	50	sacks
					WALNUTS	6	sacks
					ENGINEERING	1	Chk
					SHRINKWRAP	20	Wraps
					MUD RECORD		
		TIME	DEPTH	DENSITY			
		06:00	3,661.00 m	1,070.00 kg/m³			
		VISCOSITY	WATER LOSS	FLUID pH			
		45.00 s/l	10.00 ml/30	7.5			
		PVT	SOLIDS	OIL			
		26.5	-	-			
LOCATION SHAKERS							
		TIME	DEPTH	DENSITY			
		12:00	4,088.00 m	1,070.00 kg/m³			
		VISCOSITY	WATER LOSS	FLUID pH			
		48.00 s/l	8.00 ml/30	7			
		PVT	SOLIDS	OIL			
		32	-	-			
LOCATION SHAKERS							
FUEL USE							
FUEL				USAGE			
Marked Diesel				4,476.0 L			
PUMPS							
Pump #1		Pump #2					
Model	Work Force	Model	Work Force				
Duplex	1300	Duplex	1300				
SPM	TRIPLEX	SPM	TRIPLEX				
Pressure	130	Pressure	70				
Hours Run	0 kpa	Hours Run	0 kpa				
Liner Size	12.0 hr	Liner Size	4.0 hr				
	114.0 mm		114.0 mm				
SOLIDS CONTROL							



	NAME	INTAKE	OVERFLOW	UNDERFLOW
	CENTRIFUGE	1,070 kg/m ³	1,050 kg/m ³	1,900 kg/m ³



Drilling Daily Report - 2022-01-27 - Day 11
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

LOCATION DATA									
NAME		LICENSE #	UWI	EVENT	AFE #	AFE \$			
BLACKSPUR HZ LEDUC-WB 16-11-51-2		0502001	100/16-11-051-02W5/00	Initial Drill	21DR0012	\$1,657,265.00			
DRILLING DATA									
EVENT	STAGE	MOVE DATE	SPUD DATE	RELEASE DATE	RIG				
Initial Drill	DRILLING	2022-01-17	2022-01-19	2022-01-30	Horizon #43				
SURVEYED	CUT / FILL	KB > GROUND	CF > GROUND	GROUND	KB ELEVATION	CF ELEVATION			
742.30 m	-0.29 m	5.50 m	0.00 m	742.01 m	747.51 m	742.01 m			
DAILY REPORT DETAILS									
REPORT DATE	DEPTH	DRILLING TIME	PROGRESS	AVG ROP	MAN HOURS	CUM. HOURS	NON-PRODUCTIVE		
2022-01-27	4,088.00 m	5.75 hr	437.00 m	76.00 m/hr	-	1,189.00 hr	0.00 hr		
MUD		RENTALS		COSTS					
MUD	CUM. MUD	RENTALS	CUM. RENTALS	DRILLING DAILY	DRILLING TOTAL	EVENT DAILY	EVENT TOTAL		
\$11,285.75	\$88,698.19	\$10,011.50	\$80,215.00	\$56,342.25	\$1,116,608.75	\$56,342.25	\$1,200,463.75		
DAILY OPERATIONS									
MORNING OPERATIONS									
No safety concerns or environmental issues to report. Continue to RIH, Begin washing down stands @ 3050mKB, pipe hanging up from hole drag. Currently @ 3700mKB.									
DAILY OPERATIONAL SUMMARY									
Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of drilling 159mm main hole & tripping. The rig is running well with no safety or environmental issues to report. Drill 159mm Lateral section from 3651mKB - 4088mKB (TD @ 12:15). Extrap to bit @ 4088mKB, Inc: 89.1deg, Azm: 48.7deg, TVD: 1359.57m Rotating ROP - 90m/hr, Sliding ROP - 30m/hr, Vis- 39, Mud Wt - 1070Kg/m, Gamma - 58API, Gas - 1800units. Condition mud & circulate hole clean, Wipertrip to intermediate csg shoe, (Spot lube pill with Graphite, Elixir Lube & Beads in lateral & up to KOP). RIH, ream & clean any tight spots & doglegs 4deg & greater.									
DAILY FORECAST									
Continue to wash to bottom, condition mud & circ hole clean, spot lube pill,(30m³ that will cover lateral section & up to KOP with 2% Elixir + 5Kg/m³ Graphite + 5Kg/m³ Sunburst Beads + 3Kg/m³ Walnut M) POOH, rack back 35HWDP Stands & 50DP Stands, lay down rest of DP. Slip & cut drill line, lay down directional assembly, Rig in Powertongs & torque & run 135Jts 114.3mm Csg with Low friction disrupter bands, 2 Interra Toe Sleeves & 52 Frac Sleeves.									
TIMELOG					WEATHER				
FROM	TO	DUR	NPT CODE	DETAILS	TIME	TEMP	CONDITIONS		
00:00	03:00	3.0 h	2	Drill 159mm lateral section from 3651m to 3880m	06:00	-7 °C	PARTLY CLOUDY		
03:00	06:30	3.5 h	20A	Directional surveys, connections, work pipe	WIND STRENGTH		ROAD CONDITION		
06:30	06:45	0.25 h	21	Crew change handover meeting	CALM		GOOD		
06:45	07:45	1.0 h	2	Drill 159mm lateral section from 3880m to 3920m	PERSONNEL				
07:45	08:00	0.25 h	7	Rig Service/ function HCR 5 secs to close	DRILLING ENGINEER - On Site				
08:00	10:30	2.5 h	20A	Directional surveys , connections, worked pipe , down link mwd tool	Derek Rae 403-701-0899				
10:30	12:15	1.75 h	2	Drill 159mm lateral section from 3920m-4088m	DRILLING CONSULTANT - On Site				
12:15	14:30	2.25 h	5D	Circulate and Condition	Mike Bowen 403-348-9127				
14:30	16:00	1.5 h	6M	Trip out of hole , flow check @ 3905m,	DRILLING CONSULTANT - On Site				
16:00	18:30	2.5 h	6M	Wiper Trip , flow check @ 2819m	Darren Burton 780-518-7767				
18:30	18:45	0.25 h	21	crew hand over	DRILLING MANAGER - On Site				
18:45	20:15	1.5 h	6M	Wiper Trip Tto shoe, flow check	Nick Stanford 403-804-0296				
20:15	23:45	3.5 h	6A	Trip in hole, ream doglegs and the turn, trip in to 2550m	MUD ADDITIVES				
23:45	00:00	0.25 h	7	Rig Service/ function pipe rams 4 secs to close	PRODUCT				
BOTTOM HOLE ASSEMBLY (LAST)					AMOUNT UNIT				
#	DESCRIPTION	OD	ID	LENGTH	UNIPAC LVD	15	sacks		
1	BIT	159.0 mm	0.0 mm	0.2 m	UNISTAR	11	sacks		
1	MUD MOTOR	176.0 mm	0.0 mm	8.38 m	HUMALITE	22	sacks		
1	PONY SLICK COLLAR	160.0 mm	70.0 mm	2.88 m	WALNUTS	22	sacks		
1	FLEX NMDC	160.0 mm	69.0 mm	9.33 m	GRAPHITE	45	sacks		
1	GAP SUB	163.0 mm	74.0 mm	1.7 m	BARITE	50	sacks		
1	FLEX NMDC	160.0 mm	69.0 mm	9.27 m	POLYZAN	2	sacks		
1	X/O	165.0 mm	64.0 mm	1.18 m	ENGINEERING	1	Chk		
1	DP(4.5 DS40)	165.0 mm	97.2 mm	9.58 m	MUD RECORD				
1	REAMER	165.0 mm	62.0 mm	4.07 m	TIME	DEPTH	DENSITY		
6	DP(4.5 DS40)	165.0 mm	97.2 mm	56.87 m	07:15	3,937.00 m	1,070.00 kg/m³		
1	JARS-HYD	165.0 mm	0.71 mm	4.0 m	VISCOSITY	WATER LOSS	FLUID pH		
66	DP(4.5 DS40)	165.0 mm	97.2 mm	627.55 m	35.00 s/l	15.00 ml/30	7		
1	AGITATOR	165.0 mm	0.0 mm	5.48 m	PVT	SOLIDS	OIL		
224	DP(4.5 DS40)	165.0 mm	97.2 mm	2,131.68 m	38.3	-	-		
70	HWD(4.5 DS40)	165.0 mm	68.0 mm	664.13 m	LOCATION	SHAKERS			
BIT RECORDS					TIME	DEPTH	DENSITY		
#	SIZE	MANUFACTURER	TYPE	IN	OUT	HRS	11:00	4,020.00 m	1,070.00 kg/m³
	(mm)			(m)	(m)		VISCOSITY	WATER LOSS	FLUID pH
3	159.0 REED	TKC63-B1	1,615.0	0.0	3.00 hr		37.00 s/l	10.00 ml/30	7
3	159.0 REED	TKC63-B1	1,615.0	0.0	2.75 hr		PVT	SOLIDS	OIL
TOTAL						5.75 hr	36	-	-
DRILLING PARAMETERS								LOCATION	
From Time	To Time	From Depth	To Depth	Activity	Rotary RPM	Weight on Bit	SHAKERS		
00:00	03:00	3,651.0 m	3,920.0 m	DRILL	45	8.5 kdaN	FUEL USE		
06:45	09:30	3,920.0 m	4,088.0 m	DRILL	45	9.5 kdaN	FUEL		
DEVIATION SURVEYS								USAGE	
WELLBORE	MD	TVD	DEVIATION	DIRECTION	METHOD	Marked Diesel			5,709.0 L
Original Hole	3,656.33 m	1,359.17 m	91.30°	50.60°		PUMPS			
Original Hole	3,675.45 m	1,358.88 m	90.40°	50.60°		Pump #1	Work Force	Pump #2	Work Force
Original Hole	3,694.58 m	1,358.90 m	89.50°	50.40°		Model	1300	Model	1300
Original Hole	3,713.56 m	1,358.82 m	91.00°	51.00°		Duplex	TRIPLEX	Duplex	TRIPLEX
Original Hole	3,732.62 m	1,358.50 m	90.90°	50.20°		SPM	70	SPM	70
						Pressure	12,000 kpa	Pressure	12,000 kpa



Drilling Daily Report - 2022-01-27 - Day 11
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

Original Hole	3,751.58 m	1,358.24 m	90.70°	50.00°	Hours Run	20.0 hr	Hours Run	20.0 hr
Original Hole	3,770.57 m	1,358.14 m	89.90°	49.50°	Liner Size	114.0 mm	Liner Size	114.0 mm
Original Hole	3,789.54 m	1,358.19 m	89.80°	49.50°	HOLE CONDITION			
Original Hole	3,808.54 m	1,358.20 m	90.10°	49.00°	DRAG UP	DRAG DN	TORQUE	FILL
Original Hole	3,827.62 m	1,358.15 m	90.20°	50.20°	45.0 kdaN	35.0 kdaN	16,000.0 Nm	0.0 m
Original Hole	3,846.78 m	1,358.20 m	89.50°	49.30°	45.0 kdaN	35.0 kdaN	15,700.0 Nm	0.0 m
Original Hole	3,865.75 m	1,358.45 m	89.00°	49.00°	SOLIDS CONTROL			
Original Hole	3,884.91 m	1,358.54 m	90.50°	47.80°	NAME	INTAKE	OVERFLOW	UNDERFLOW
Original Hole	3,903.99 m	1,358.50 m	89.70°	47.60°	CENTRIFUGE	1,070 kg/m³	1,050 kg/m³	1,900 kg/m³
Original Hole	3,923.03 m	1,358.75 m	88.80°	47.20°				
Original Hole	3,942.01 m	1,358.92 m	90.20°	48.90°				
Original Hole	3,960.95 m	1,358.92 m	89.80°	49.70°				
Original Hole	3,979.92 m	1,358.95 m	90.00°	50.60°				
Original Hole	3,998.98 m	1,358.93 m	90.10°	50.48°				
Original Hole	4,018.04 m	1,358.87 m	90.30°	49.80°				
Original Hole	4,036.96 m	1,358.87 m	89.70°	48.50°				
Original Hole	4,055.92 m	1,359.07 m	89.10°	48.70°				

LOCATION DATA							
NAME		LICENSE #	UWI	EVENT	AFE #	AFE \$	
BLACKSPUR HZ LEDUC-WB 16-11-51-2		0502001	100/16-11-051-02W5/00	Initial Drill	21DR0012	\$1,657,265.00	
DRILLING DATA							
EVENT	STAGE	MOVE DATE	SPUD DATE	RELEASE DATE	RIG		
Initial Drill	DRILLING	2022-01-17	2022-01-19	2022-01-30	Horizon #43		
SURVEYED	CUT / FILL	KB > GROUND	CF > GROUND	GROUND	KB ELEVATION	CF ELEVATION	
742.30 m	-0.29 m	5.50 m	0.00 m	742.01 m	747.51 m	742.01 m	
DAILY REPORT DETAILS							
REPORT DATE	DEPTH	DRILLING TIME	PROGRESS	AVG ROP	MAN HOURS	CUM. HOURS	NON-PRODUCTIVE
2022-01-26	3,651.00 m	10.75 hr	881.00 m	78.31 m/hr	132.00 hr	1,189.00 hr	0.00 hr
MUD		RENTALS		COSTS			
MUD	CUM. MUD	RENTALS	CUM. RENTALS	DRILLING DAILY	DRILLING TOTAL	EVENT DAILY	EVENT TOTAL
\$8,634.15	\$77,412.44	\$10,011.50	\$70,203.50	\$81,965.72	\$1,060,266.50	\$81,965.72	\$1,144,121.50
DAILY OPERATIONS							
MORNING OPERATIONS No safety concerns or environmental issues to report. Drill 159mm Lateral section from 3651mKB - 3880mKB Rotating ROP - 100m/hr, Sliding ROP -30m/hr, Vis- 39, Mud Wt - 1080Kg/m, Gamma - 65API, Gas - 826units. Currently 0.35m Above & 1.1m Left of line, Sliding -5.5%, Rotate -94.5% Last survey @ 3865m, Inc: 89deg, Azm: 49deg, TVD: 1358.49m.							
DAILY OPERATIONAL SUMMARY Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of drilling 159mm main hole. The rig is running well with no safety or environmental issues to report. Drill 159mm Lateral section from 2770mKB - 3651mKB Rotating ROP - 110m/hr, Sliding ROP - 35m/hr, Vis- 39, Mud Wt - 1080Kg/m, Gamma - 71API, Gas - 585units.							
DAILY FORECAST Drill ahead 159mm lateral section as per Phoenix Directional Plan # 5 to planned TD @ 4202mKB. Condition mud & circulate hole clean, wiper trip to intermediate csg shoe, RIH, ream & clean any tight spots & doglegs 4deg & greater.							
TIMELOG					WEATHER		
FROM	TO	DUR	NPT CODE	DETAILS	TIME	TEMP	CONDITIONS
00:00	03:00	3.0 h	2	Drill 159mm lateral section from 2770m to 3030m	06:00	0 °C	OVERCAST
03:00	06:30	3.5 h	20A	Directional surveys, connections, work pipe	WIND STRENGTH		ROAD CONDITION
06:30	06:45	0.25 h	21	Crew change handover meeting	CALM		GOOD
06:45	07:45	1.0 h	2	Drill 159mm lateral section from 3030m 3050m	PERSONNEL		
07:45	08:00	0.25 h	7	Rig Service/ function pipe rams 5 secs to close	DRILLING ENGINEER - On Site Derek Rae 403-701-0899		
08:00	11:15	3.25 h	2	Drill 159MM lateral section from 3050M- 3384M	DRILLING CONSULTANT - On Site Mike Bowen 403-348-9127		
11:15	15:45	4.5 h	20A	Directional surveys , connections , worked pipe	DRILLING CONSULTANT - On Site Darren Burton 780-518-7767		
15:45	16:00	0.25 h	7	Rig Service function test HCR 2 secs to open	DRILLING MANAGER - On Site Nick Stanford 403-804-0296		
16:00	17:30	1.5 h	2	Drill 159mm lateral section from 3384m- 3498m	MUD ADDITIVES		
17:30	18:30	1.0 h	20A	Directional surveys , connections , worked pipe	PRODUCT		
18:30	18:45	0.25 h	21	crew hand over	AMOUNT		
18:45	20:45	2.0 h	2	Drill 159mm lateral section from 3498m- 3651m	UNIT		
20:45	23:45	3.0 h	20A	Directional surveys, connections, work pipe	UNIPAC HVD 2 sacks		
23:45	00:00	0.25 h	7	Rig Service/ Function Annular 18 secs to close	UNIPAC LVD 7 sacks		
BOTTOM HOLE ASSEMBLY (LAST)					UNISTAR 7 sacks		
#	DESCRIPTION			OD	ID	LENGTH	WALNUTS 33 sacks
1	BIT			159.0 mm	0.0 mm	0.2 m	GRAPHITE 55 sacks
1	MUD MOTOR			176.0 mm	0.0 mm	8.38 m	HUMALITE 20 sacks
1	PONY SLICK COLLAR			160.0 mm	70.0 mm	2.88 m	ENGINEERING 1 Chk
1	FLEX NMDC			160.0 mm	69.0 mm	9.33 m	MUD RECORD
1	GAP SUB			163.0 mm	74.0 mm	1.7 m	TIME
1	FLEX NMDC			160.0 mm	69.0 mm	9.27 m	06:00
1	X/O			165.0 mm	64.0 mm	1.18 m	DEPTH
1	DP(4.5 DS40)			165.0 mm	97.2 mm	9.58 m	3,032.00 m
1	REAMER			165.0 mm	62.0 mm	4.07 m	DENSITY
6	DP(4.5 DS40)			165.0 mm	97.2 mm	56.87 m	1,100.00 kg/m³
1	JARS-HYD			165.0 mm	0.71 mm	4.0 m	VISCOSITY
66	DP(4.5 DS40)			165.0 mm	97.2 mm	627.55 m	WATER LOSS
1	AGITATOR			165.0 mm	0.0 mm	5.48 m	FLUID pH
224	DP(4.5 DS40)			165.0 mm	97.2 mm	2,131.68 m	42.00 s/l
70	HWDP (4.5 DS40)			165.0 mm	68.0 mm	664.13 m	7.50 ml/30
BIT RECORDS					PVT		
#	SIZE	MANUFACTURER	TYPE	IN	OUT	HRS	SOLIDS
	(mm)			(m)	(m)		
3	159.0 REED	TKC63-B1	2,770.0	3,050.0	4.00 hr		0%
3	159.0 REED	TKC63-B1	3,050.0	3,384.0	3.25 hr		
3	159.0 REED	TKC63-B1	3,384.0	3,651.0	3.50 hr		
TOTAL						10.75 hr	LOCATION
DRILLING PARAMETERS							SHAKERS
From Time	To Time	From Depth	To Depth	Activity	Rotary RPM	Weight on Bit	FUEL USE
00:00	04:00	2,770.0 m	3,050.0 m	DRILL	45	9.5 kdaN	FUEL
08:00	11:45	3,050.0 m	3,384.0 m	DRILL	45	9.5 kdaN	Marked Diesel
16:00	19:30	3,384.0 m	3,651.0 m	DRILL	45	9.0 kdaN	5,698.0 L
DEVIATION SURVEYS							PUMPS
WELLBORE	MD	TVD	DEVIATION	DIRECTIONMETHOD			Pump #1
Original Hole	2,772.44 m	1,364.66 m	90.70°	48.40°			Model
Original Hole	2,791.58 m	1,364.46 m	90.50°	48.50°			Work Force
Original Hole	2,810.66 m	1,364.23 m	90.90°	48.60°			1300
							Model
							Work Force
							1300
							SPM
							70
							Pressure
							21,500 kpa
							Hours Run
							24.0 hr



Drilling Daily Report - 2022-01-26 - Day 10
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

Original Hole	2,829.75 m	1,364.05 m	90.20°	48.50°	Liner Size	114.0 mm	Liner Size	114.0 mm
Original Hole	2,848.70 m	1,363.90 m	90.70°	49.20°	HOLE CONDITION			
Original Hole	2,858.17 m	1,363.85 m	89.90°	49.00°	DRAG UP	DRAG DN	TORQUE	FILL
Original Hole	2,877.02 m	1,363.68 m	91.10°	50.00°	10.0 kdaN	25.0 kdaN	10,000.0 Nm	0.0 m
Original Hole	2,895.88 m	1,363.32 m	91.10°	50.30°	33.0 kdaN	37.0 kdaN	13,500.0 Nm	0.0 m
Original Hole	2,914.76 m	1,363.06 m	90.50°	49.90°	40.0 kdaN	30.0 kdaN	15,000.0 Nm	0.0 m
Original Hole	2,933.88 m	1,362.91 m	90.40°	49.70°	SOLIDS CONTROL			
Original Hole	2,952.80 m	1,362.83 m	90.10°	49.60°	NAME	INTAKE	OVERFLOW	UNDERFLOW
Original Hole	2,971.78 m	1,362.68 m	90.80°	49.50°	CENTRIFUGE	1,080 kg/m³	1,065 kg/m³	1,900 kg/m³
Original Hole	2,990.82 m	1,362.43 m	90.70°	50.00°				
Original Hole	3,009.79 m	1,362.29 m	90.10°	50.20°				
Original Hole	3,028.75 m	1,362.33 m	89.70°	50.10°				
Original Hole	3,047.71 m	1,362.48 m	89.40°	50.40°				
Original Hole	3,066.65 m	1,362.66 m	89.50°	51.30°				
Original Hole	3,085.61 m	1,362.92 m	88.90°	50.90°				
Original Hole	3,104.61 m	1,363.29 m	88.90°	49.90°				
Original Hole	3,123.54 m	1,363.44 m	90.20°	50.10°				
Original Hole	3,142.54 m	1,363.29 m	90.70°	50.30°				
Original Hole	3,161.57 m	1,363.10 m	90.40°	50.20°				
Original Hole	3,180.56 m	1,362.99 m	90.30°	50.40°				
Original Hole	3,199.67 m	1,363.04 m	89.40°	50.10°				
Original Hole	3,218.55 m	1,363.34 m	88.80°	49.50°				
Original Hole	3,237.47 m	1,363.53 m	90.00°	48.80°				
Original Hole	3,256.45 m	1,363.37 m	91.00°	48.60°				
Original Hole	3,275.45 m	1,363.09 m	90.70°	48.40°				
Original Hole	3,294.39 m	1,362.99 m	89.90°	48.50°				
Original Hole	3,313.56 m	1,362.90 m	90.60°	47.90°				
Original Hole	3,332.55 m	1,362.51 m	91.80°	47.90°				
Original Hole	3,351.53 m	1,361.88 m	92.00°	48.90°				
Original Hole	3,370.46 m	1,361.33 m	91.30°	49.00°				
Original Hole	3,389.36 m	1,361.02 m	90.60°	49.10°				
Original Hole	3,408.38 m	1,360.90 m	90.10°	49.20°				
Original Hole	3,427.28 m	1,360.95 m	89.60°	49.30°				
Original Hole	3,446.26 m	1,360.88 m	90.80°	49.40°				
Original Hole	3,465.20 m	1,360.57 m	91.10°	49.50°				
Original Hole	3,484.13 m	1,360.31 m	90.50°	49.30°				
Original Hole	3,503.31 m	1,360.36 m	89.20°	47.70°				
Original Hole	3,522.30 m	1,360.65 m	89.00°	46.20°				
Original Hole	3,541.25 m	1,360.74 m	90.50°	47.10°				
Original Hole	3,560.51 m	1,360.79 m	89.20°	46.90°				
Original Hole	3,579.79 m	1,360.80 m	90.70°	48.10°				
Original Hole	3,598.97 m	1,360.45 m	91.40°	49.10°				
Original Hole	3,617.99 m	1,360.09 m	90.80°	49.40°				
Original Hole	3,637.17 m	1,359.67 m	91.70°	50.10°				

LOCATION DATA																	
NAME		LICENSE #		UWI		EVENT		AFE #		AFE \$							
BLACKSPUR HZ LEDUC-WB 16-11-51-2		0502001		100/16-11-051-02W5/00		Initial Drill		21DR0012		\$1,657,265.00							
DRILLING DATA																	
EVENT		STAGE		MOVE DATE		SPUD DATE		RELEASE DATE		RIG							
Initial Drill		DRILLING		2022-01-17		2022-01-19		2022-01-30		Horizon #43							
SURVEYED		CUT / FILL		KB > GROUND		CF > GROUND		GROUND		KB ELEVATION		CF ELEVATION					
742.30 m		-0.29 m		5.50 m		0.00 m		742.01 m		747.51 m		742.01 m					
DAILY REPORT DETAILS																	
REPORT DATE		DEPTH		DRILLING TIME		PROGRESS		AVG ROP		MAN HOURS		CUM. HOURS		NON-PRODUCTIVE			
2022-01-25		2,770.00 m		12.00 hr		905.00 m		70.98 m/hr		132.00 hr		1,057.00 hr		0.00 hr			
MUD				RENTALS				COSTS									
MUD		CUM. MUD		RENTALS		CUM. RENTALS		DRILLING DAILY		DRILLING TOTAL		EVENT DAILY		EVENT TOTAL			
\$4,759.44		\$68,778.29		\$10,011.50		\$60,192.00		\$64,380.49		\$978,300.78		\$64,380.49		\$1,062,155.78			
DAILY OPERATIONS																	
MORNING OPERATIONS																	
No safety concerns or environmental issues to report. Drill 159mm Lateral section from 2770mKB - 3015mKB Rotating ROP - 110m/hr, Sliding ROP - 45m/hr, Vis- 40, Mud Wt - 1100Kg/m, WL - 7, Gamma - 78API, Gas - 400units. Currently 0.28m below & 0.28m Left of line, Slid -11%, Rotate -89% Last survey @ 2991m, Inc: 90.7deg, Azm: 50deg, TVD: 1362.43m.																	
DAILY OPERATIONAL SUMMARY																	
Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of drilling 159mm main hole. The rig is running well with no safety or environmental issues to report. Drill 159mm Lateral section from 1865mKB - 2770mKB Rotating ROP - 120m/hr, Sliding ROP - 45m/hr, Vis- 39, Mud Wt - 1100Kg/m, WL - 8, Gamma - 78API, Gas - 263units. Engage agitator @ 2500mKB - (2000Kpa increase in pump pressure).																	
DAILY FORECAST																	
Drill ahead 159mm lateral section as per Phoenix Directional Plan # 5. Planned TD @ 4202mKB.																	
TIMELOG								WEATHER									
FROM		TO		DUR		NPT CODE		DETAILS		TIME		TEMP		CONDITIONS			
00:00		03:30		3.5 h		2		Drill 159mm lateral section from 1865m to 2005m		06:00		-5 °C		CLEAR			
03:30		06:30		3.0 h		20A		Directional surveys, connections, work pipe		WIND STRENGTH				ROAD CONDITION			
06:30		06:45		0.25 h		21		Crew change handover meeting		CALM				GOOD			
06:45		07:45		1.0 h		2		Drill 159mm lateral section from 2005m to 2030m		PERSONNEL							
07:45		08:00		0.25 h		7		Rig Service/ function pipe rams 5 secs to close		DRILLING ENGINEER - On Site							
08:00		12:45		4.75 h		2		Drill 159MM lateral section from 2030m- 2463m		Derek Rae 403-701-0899							
12:45		15:45		3.0 h		20A		Directional surveys , connections , worked pipe		DRILLING CONSULTANT - On Site							
15:45		16:00		0.25 h		7		Rig Service function test HCR 2 secs to open		Mike Bowen 403-348-9127							
16:00		17:30		1.5 h		2		Drill 159MM lateral section from 2463m- 2556m , drop ball for agitator at 2500m , 2000kpa increase		DRILLING CONSULTANT - On Site							
17:30		18:30		1.0 h		20A		Directional surveys , connections , worked pipe		Darren Burton 780-518-7767							
18:30		18:45		0.25 h		21		crew hand over		DRILLING MANAGER - On Site							
18:45		20:45		2.0 h		2		Drill 159mm lateral section from 2556m- 2770m		Nick Stanford 403-804-0296							
20:45		23:45		3.0 h		20A		Directional surveys, connections, work pipe		MUD ADDITIVES							
23:45		00:00		0.25 h		7		Rig Service/ function annular 18 secs to close		PRODUCT							
										AMOUNT							
										UNIT							
										UNIPAC HVD							
										2							
										sacks							
										UNIPAC LVD							
										3							
										sacks							
										UNISTAR							
										6							
										sacks							
										GRAPHITE							
										28							
										sacks							
										WALNUTS							
										8							
										sacks							
										ENGINEERING							
										1							
										Chk							
BOTTOM HOLE ASSEMBLY (LAST)								MUD RECORD									
#		DESCRIPTION		OD		ID		LENGTH		TIME		DEPTH		DENSITY			
1		BIT		159.0 mm		0.0 mm		0.2 m		07:45		2,109.00 m		1,060.00 kg/m³			
1		MUD MOTOR		176.0 mm		0.0 mm		8.38 m		VISCOSITY		WATER LOSS		FLUID pH			
1		PONY SLICK COLLAR		160.0 mm		70.0 mm		2.88 m		36.00 s/l		5.00 ml/30		9			
1		FLEX NMDC		160.0 mm		69.0 mm		9.33 m		PVT		SOLIDS		OIL			
1		GAP SUB		163.0 mm		74.0 mm		1.7 m		28		-		-			
1		FLEX NMDC		160.0 mm		69.0 mm		9.27 m		LOCATION							
1		X/O		165.0 mm		64.0 mm		1.18 m		shakers							
1		DP(4.5 DS40)		165.0 mm		97.2 mm		9.58 m		TIME		DEPTH		DENSITY			
1		REAMER		165.0 mm		62.0 mm		4.07 m		23:30		2,767.00 m		1,110.00 kg/m³			
6		DP(4.5 DS40)		165.0 mm		97.2 mm		56.87 m		VISCOSITY		WATER LOSS		FLUID pH			
1		JARS-HYD		165.0 mm		0.71 mm		4.0 m		40.00 s/l		8.00 ml/30		8.5			
66		DP(4.5 DS40)		165.0 mm		97.2 mm		627.55 m		PVT		SOLIDS		OIL			
1		AGITATOR		165.0 mm		0.0 mm		5.48 m		25.9		-		-			
214		DP(4.5 DS40)		165.0 mm		97.2 mm		2,036.46 m		LOCATION							
										SHAKERS							
BIT RECORDS								FUEL USE									
#		SIZE		MANUFACTURER		TYPE		IN		OUT		HRS		USAGE			
		(mm)						(m)		(m)							
3		159.0 REED		TKC63-B1				1,865.0		2,030.0		4.50 hr					
3		159.0 REED		TKC63-B1				2,030.0		2,463.0		4.75 hr					
3		159.0 REED		TKC63-B1				2,463.0		2,770.0		3.50 hr					
TOTAL												12.75 hr					
DRILLING PARAMETERS												PUMPS					
From Time		To Time		From Depth		To Depth		Activity		Rotary RPM		Weight on Bit		Pump #1		Pump #2	
00:00		04:30		1,865.0 m		2,030.0 m		DRILL		45		8.0 kdaN		Model		Work Force	
08:00		12:45		2,030.0 m		2,463.0 m		DRILL		45		9.5 kdaN		1300		1300	
16:00		19:30		2,463.0 m		2,770.0 m		DRILL		45		9.5 kdaN		Duplex		TRIPLEX	
														SPM		76	
														Pressure		20,000 kpa	
														Hours Run		24.0 hr	
														Liner Size		114.0 mm	
																Liner Size	
																114.0 mm	
DEVIATION SURVEYS																	
WELLBORE		MD		TVD		DEVIATION		DIRECTION		METHOD							
Original Hole		1,868.18 m		1,366.32 m		90.70°		77.70°									
Original Hole		1,877.69 m		1,366.23 m		90.40°		76.10°									
Original Hole		1,887.16 m		1,366.15 m		90.50°		73.40°									

Original Hole	1,896.65 m	1,366.10 m	90.10°	71.70°
Original Hole	1,906.32 m	1,366.08 m	90.20°	69.40°
Original Hole	1,915.77 m	1,366.10 m	89.60°	67.50°
Original Hole	1,925.35 m	1,366.15 m	89.80°	65.60°
Original Hole	1,934.94 m	1,366.12 m	90.50°	63.90°
Original Hole	1,944.34 m	1,365.93 m	91.80°	62.00°
Original Hole	1,953.98 m	1,365.64 m	91.70°	60.00°
Original Hole	1,963.65 m	1,365.41 m	91.00°	57.90°
Original Hole	1,973.13 m	1,365.29 m	90.50°	56.60°
Original Hole	1,992.34 m	1,365.24 m	89.80°	54.00°
Original Hole	2,011.43 m	1,365.42 m	89.10°	53.90°
Original Hole	2,030.49 m	1,365.60 m	89.80°	52.20°
Original Hole	2,049.59 m	1,365.87 m	88.60°	50.90°
Original Hole	2,068.76 m	1,366.37 m	88.40°	50.00°
Original Hole	2,087.82 m	1,366.65 m	89.90°	50.20°
Original Hole	2,106.78 m	1,366.65 m	90.10°	49.50°
Original Hole	2,125.72 m	1,366.49 m	90.90°	51.20°
Original Hole	2,144.66 m	1,366.31 m	90.20°	51.20°
Original Hole	2,163.82 m	1,366.32 m	89.70°	50.68°
Original Hole	2,182.88 m	1,366.46 m	89.50°	50.80°
Original Hole	2,201.87 m	1,366.34 m	91.20°	50.20°
Original Hole	2,221.09 m	1,365.95 m	91.10°	49.90°
Original Hole	2,240.14 m	1,365.65 m	90.70°	50.50°
Original Hole	2,259.13 m	1,365.51 m	90.20°	50.40°
Original Hole	2,278.18 m	1,365.47 m	90.00°	50.20°
Original Hole	2,297.15 m	1,365.44 m	90.20°	50.20°
Original Hole	2,316.22 m	1,365.39 m	90.10°	49.60°
Original Hole	2,335.11 m	1,365.34 m	90.20°	49.30°
Original Hole	2,354.15 m	1,365.17 m	90.80°	48.60°
Original Hole	2,373.12 m	1,365.01 m	90.20°	49.30°
Original Hole	2,392.01 m	1,364.84 m	90.80°	49.20°
Original Hole	2,411.06 m	1,364.51 m	91.20°	49.30°
Original Hole	2,430.03 m	1,364.28 m	90.20°	49.90°
Original Hole	2,449.13 m	1,364.23 m	90.10°	51.20°
Original Hole	2,467.98 m	1,364.43 m	88.70°	50.80°
Original Hole	2,487.10 m	1,364.88 m	88.60°	50.60°
Original Hole	2,506.21 m	1,365.13 m	89.90°	50.70°
Original Hole	2,525.18 m	1,365.24 m	89.40°	50.80°
Original Hole	2,544.19 m	1,365.54 m	88.80°	51.00°
Original Hole	2,563.14 m	1,365.77 m	89.80°	49.80°
Original Hole	2,582.26 m	1,365.76 m	90.30°	49.00°
Original Hole	2,601.41 m	1,365.67 m	90.20°	49.60°
Original Hole	2,620.51 m	1,365.66 m	89.90°	50.00°
Original Hole	2,639.57 m	1,365.69 m	89.90°	49.00°
Original Hole	2,658.70 m	1,365.62 m	90.50°	47.80°
Original Hole	2,677.63 m	1,365.36 m	91.10°	48.10°
Original Hole	2,696.54 m	1,364.98 m	91.20°	48.70°
Original Hole	2,715.60 m	1,364.78 m	90.00°	47.90°
Original Hole	2,734.54 m	1,364.75 m	90.20°	48.40°
Original Hole	2,753.47 m	1,364.75 m	89.80°	48.50°

HOLE CONDITION				
DRAG UP	DRAG DN	TORQUE	FILL	DEPTH
6.0 kdaN	18.0 kdaN	10,000.0 Nm	0.0 m	-
7.0 kdaN	20.0 kdaN	85.0 Nm	0.0 m	-
10.0 kdaN	25.0 kdaN	10,000.0 Nm	0.0 m	-

SOLIDS CONTROL			
NAME	INTAKE	OVERFLOW	UNDERFLOW
CENTRIFUGE	1,080 kg/m³	1,060 kg/m³	1,890 kg/m³
centrifuge	1,060 kg/m³	1,030 kg/m³	1,900 kg/m³

LOCATION DATA							
NAME		LICENSE #	UWI	EVENT	AFE #	AFE \$	
BLACKSPUR HZ LEDUC-WB 16-11-51-2		0502001	100/16-11-051-02W5/00	Initial Drill	21DR0012	\$1,657,265.00	
DRILLING DATA							
EVENT	STAGE	MOVE DATE	SPUD DATE	RELEASE DATE	RIG		
Initial Drill	DRILLING	2022-01-17	2022-01-19	2022-01-30	Horizon #43		
SURVEYED	CUT / FILL	KB > GROUND	CF > GROUND	GROUND	KB ELEVATION	CF ELEVATION	
742.30 m	-0.29 m	5.50 m	0.00 m	742.01 m	747.51 m	742.01 m	
DAILY REPORT DETAILS							
REPORT DATE	DEPTH	DRILLING TIME	PROGRESS	AVG ROP	MAN HOURS	CUM. HOURS	NON-PRODUCTIVE
2022-01-24	1,865.00 m	4.00 hr	250.00 m	62.50 m/hr	132.00 hr	925.00 hr	0.00 hr
MUD		RENTALS		COSTS			
MUD	CUM. MUD	RENTALS	CUM. RENTALS	DRILLING DAILY	DRILLING TOTAL	EVENT DAILY	EVENT TOTAL
\$3,924.00	\$64,018.85	\$8,661.50	\$50,180.50	\$258,972.39	\$913,920.29	\$258,972.39	\$997,775.29
DAILY OPERATIONS							
MORNING OPERATIONS No safety concerns or environmental issues to report. Drill 159mm Lateral section from 1865mKB - 2006mKB Rotating ROP - 140m/hr, Sliding ROP - 45m/hr, Vis- 39, Mud Wt - 1050Kg/m, WL - 7, Gamma - 98API, Gas - 137units. Currently 0.11m below & 2.0m Left of line, Slid -14%, Rotate -86% Last survey @ 1992m, Inc: 89.8deg, Azm: 54deg, TVD: 1365.23m.							
DAILY OPERATIONAL SUMMARY Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of Tripping handling BHA & drilling 159mm main hole. The rig is running well with no safety or environmental issues to report. Held safety meeting with cementers, Cement with Trican. Pump 1m³ Optimum Flush, Pressure test to 36MPa, Pump 2m³ Optimum Flush at 1160kg/m³ containing 5Kg/m³Optimum Flush + 36L/m³ MW-2W Mud Wash. Pump 3m³ (1.42t) Scavenger, Titanium 1400-S @ 1300Kg/m³ with 2% OGC-60 + 4% AFA-7. Pump 23.2m³ (14.57t) lead cement Titanium 1400-S @ 1400Kg/m³ with 2% OGC-60 + 4% AFA-7. Pump 17.04m³ tail cement at 1600 kg/m³ (16t) T.A.C.-S with 0.2% AFA-7 + 0.4% TWR-4 + 0.5% Gel + 0.2% TDH-2 + 0.2% CFR-12. Drop plug. Displace with 32.86m³ fresh water, Bump plug @ 5 MPa over circulating pressure and hold for 5 minutes. Bleed back & check floats, floats held with 200L back. 9m³ good cement returns to surface. Plug down @ 01:45. Pressure test the casing to 1.4MPa low & 14MPa high for 11min each. Flush BOP, Nipple down & lift stack, install slips & seal, set slips @ 40DaN, cut casing, layout spools, install Tubing Head & X/O spool, nipple up, Pressure test breaks, install wear bushing, pick up directional assembly with159mm Reed TKC63-B1, on 6/7 Lobe, 6.4Stg Adj motor set @ 1.83deg, MWD Tool, Typhoon reamer, Jars and ball drop agitator 700 meters above the BHA. RIH, Slip & Cut drill line, drill out float & shoe @ 17:15, displace well to Polymer mud. Drill ahead 159mm lateral section as per Phoenix directional plan # 5 from 1615mKB - 1865mKB. Rotating ROP - 140m/hr, Sliding ROP - 50m/hr, Vis- 38, Mud Wt - 1020Kg/m, WL - 8, Gamma - 78API, Gas - 76units.							
DAILY FORECAST Drill ahead 159mm lateral section as per Phoenix Directional Plan # 5							
TIMELOG					WEATHER		
FROM	TO	DUR	NPT CODE	DETAILS	TIME	TEMP	CONDITIONS
00:00	00:15	0.25 h	21	Safety meeting with cementers	06:00	2 °C	OVERCAST
00:15	02:30	2.25 h	12C	Rig in cementers and Cement with Trican. Pump 1m³ Optimum Flush, Pressure test to 36MPa, Pump 2m³ Optimum Flush at 1160kg/m³ containing 5Kg/m³ Optimum Flush + 36L/m³ MW-2W Mud Wash. Pump 3m³ (1.42t) Scavenger, Titanium 1400-S @ 1300Kg/m³ with 2% OGC-60 + 4% AFA-7. Pump 23.2m³ (14.57t) lead cement Titanium 1400-S @ 1400Kg/m³ with 2% OGC-60 + 4% AFA-7. Pump 17.04m³ tail cement at 1600 kg/m³ (16t) T.A.C.-S with 0.2% AFA-7 + 0.4% TWR-4 + 0.5% Gel + 0.2% TDH-2 + 0.2% CFR-12. Drop plug. Displace w/ 32.86m³ fresh water, Bump plug @ 5 MPa over circulating pressure and hold for 5 minutes. Bleed back & check floats, floats held with 200L back. 9m³ good cement returns to surface. Plug down @ 01:45. Pressure test the casing to 1.4MPa low & 14MPa high for 11min each	WIND STRENGTH		ROAD CONDITION
					CALM		VERY POOR
					PERSONNEL		
					DRILLING ENGINEER - On Site Derek Rae 403-701-0899 DRILLING CONSULTANT - On Site Mike Bowen 403-348-9127 DRILLING CONSULTANT - On Site Darren Burton 780-518-7767 DRILLING MANAGER - On Site Nick Stanford 403-804-0296		
					MUD ADDITIVES		
					PRODUCT	AMOUNT	UNIT
					PH DROP	16	pail
					UNISTAR	4	sacks
					UNIPAC HVD	4	sacks
					BARITE	20	Sx
					ENGINEERING	1	Chk
					MUD RECORD		
					TIME	DEPTH	DENSITY
					00:30	1,614.00 m	1,050.00 kg/m³
					VISCOSITY	WATER LOSS	FLUID pH
					45.00 s/l	6.00 ml/30	12
					PVT	SOLIDS	OIL
					21	-	-
					LOCATION		
					SHAKERS		
					TIME	DEPTH	DENSITY
					23:00	1,852.00 m	1,020.00 kg/m³
					VISCOSITY	WATER LOSS	FLUID pH
					40.00 s/l	8.00 ml/30	10.5
					PVT	SOLIDS	OIL
					60	-	-
					LOCATION		
					SHAKERS		
					FUEL USE		
					FUEL	USAGE	
					Marked Diesel		4,409.0 L
					PUMPS		
Pump #1	Model	Work Force	Pump #2	Model	Work Force		

22:00 23:45 1.75 h 20A Directional surveys, connections, work pipe
23:45 00:00 0.25 h 7 Rig Service/ function HCR 2 secs to open

BOTTOM HOLE ASSEMBLY (LAST)

#	DESCRIPTION	OD	ID	LENGTH
1	BIT	159.0 mm	0.0 mm	0.2 m
1	MUD MOTOR	176.0 mm	0.0 mm	8.38 m
1	PONY SLICK COLLAR	160.0 mm	70.0 mm	2.88 m
1	FLEX NMDC	160.0 mm	69.0 mm	9.33 m
1	GAP SUB	163.0 mm	74.0 mm	1.7 m
1	FLEX NMDC	160.0 mm	69.0 mm	9.27 m
1	X/O	165.0 mm	64.0 mm	1.18 m
1	DP(4.5 DS40)	165.0 mm	97.2 mm	9.58 m
1	REAMER	165.0 mm	62.0 mm	4.07 m
6	DP(4.5 DS40)	165.0 mm	97.2 mm	56.87 m
1	JARS-HYD	165.0 mm	0.71 mm	4.0 m
66	DP(4.5 DS40)	165.0 mm	97.2 mm	627.55 m
1	AGITATOR	165.0 mm	0.0 mm	5.48 m
116	DP(4.5 DS40)	165.0 mm	97.2 mm	1,132.19 m

BIT RECORDS

#	SIZE (mm)	MANUFACTURER	TYPE	IN (m)	OUT (m)	HRS
3	159.0 REED		TKC63-B1	1,615.0	1,654.0	1.00 hr
3	159.0 REED		TKC63-B1	1,654.0	1,865.0	3.00 hr
TOTAL						4.00 hr

DRILLING PARAMETERS

From Time	To Time	From Depth	To Depth	Activity	Rotary RPM	Weight on Bit
17:15	18:15	1,615.0 m	1,654.0 m	DRILL	40	8.0 kdaN
18:45	21:45	1,654.0 m	1,865.0 m	DRILL	40	8.0 kdaN

DEVIATION SURVEYS

WELLBORE	MD	TVD	DEVIATION	DIRECTION	METHOD
Original Hole	1,630.43 m	1,368.90 m	86.20°	88.00°	
Original Hole	1,640.03 m	1,369.55 m	86.00°	87.30°	
Original Hole	1,649.53 m	1,370.08 m	87.60°	87.10°	
Original Hole	1,659.03 m	1,370.34 m	89.20°	87.40°	
Original Hole	1,668.49 m	1,370.34 m	90.90°	87.50°	
Original Hole	1,677.99 m	1,370.19 m	90.80°	87.20°	
Original Hole	1,687.48 m	1,370.05 m	91.00°	86.60°	
Original Hole	1,697.08 m	1,369.86 m	91.20°	86.80°	
Original Hole	1,706.58 m	1,369.70 m	90.80°	86.70°	
Original Hole	1,725.56 m	1,369.36 m	91.20°	86.10°	
Original Hole	1,744.49 m	1,368.98 m	91.10°	85.30°	
Original Hole	1,763.49 m	1,368.54 m	91.60°	86.80°	
Original Hole	1,782.44 m	1,368.01 m	91.60°	86.70°	
Original Hole	1,801.51 m	1,367.47 m	91.60°	86.90°	
Original Hole	1,811.00 m	1,367.25 m	91.10°	86.60°	
Original Hole	1,820.46 m	1,367.05 m	91.30°	86.80°	
Original Hole	1,830.04 m	1,366.83 m	91.40°	85.30°	
Original Hole	1,839.54 m	1,366.62 m	91.10°	83.70°	
Original Hole	1,849.19 m	1,366.49 m	90.40°	82.00°	
Original Hole	1,858.68 m	1,366.42 m	90.50°	80.00°	

	1300		1300
Duplex	TRIPLEX	Duplex	TRIPLEX
SPM	76	SPM	76
Pressure	13,000 kpa	Pressure	13,000 kpa
Hours Run	10.0 hr	Hours Run	5.3 hr
Liner Size	114.0 mm	Liner Size	114.0 mm

HOLE CONDITION

DRAG UP	DRAG DN	TORQUE	FILL	DEPTH
3.0 kdaN	13.0 kdaN	7,000.0 Nm	0.0 m	-

SOLIDS CONTROL

NAME	INTAKE	OVERFLOW	UNDERFLOW
centrifuge	1,020 kg/m³	1,010 kg/m³	1,890 kg/m³

LOCATION DATA							
NAME		LICENSE #	UWI	EVENT	AFE #	AFE \$	
BLACKSPUR HZ LEDUC-WB 16-11-51-2		0502001	100/16-11-051-02W5/00	Initial Drill	21DR0012	\$1,657,265.00	
DRILLING DATA							
EVENT	STAGE	MOVE DATE	SPUD DATE	RELEASE DATE	RIG		
Initial Drill	DRILLING	2022-01-17	2022-01-19	2022-01-30	Horizon #43		
SURVEYED	CUT / FILL	KB > GROUND	CF > GROUND	GROUND	KB ELEVATION	CF ELEVATION	
742.30 m	-0.29 m	5.50 m	0.00 m	742.01 m	747.51 m	742.01 m	
DAILY REPORT DETAILS							
REPORT DATE	DEPTH	DRILLING TIME	PROGRESS	AVG ROP	MAN HOURS	CUM. HOURS	NON-PRODUCTIVE
2022-01-23	1,615.00 m	0.00 hr	0.00 m	0.00 m/hr	132.00 hr	793.00 hr	0.00 hr
MUD		RENTALS		COSTS			
MUD	CUM. MUD	RENTALS	CUM. RENTALS	DRILLING DAILY	DRILLING TOTAL	EVENT DAILY	EVENT TOTAL
\$1,536.60	\$60,094.85	\$7,446.50	\$41,519.00	\$86,529.60	\$654,947.90	\$86,529.60	\$738,802.90
DAILY OPERATIONS							
MORNING OPERATIONS							
No safety concerns or environmental issues to report. Held safety meeting w/ cementers, Cement with Trican. Pump 1m³ Optimum Flush, Pressure test to 36MPa, Pump 2m³ Optimum Flush at 1160kg/m³ containing 5Kg/m³ Optimum Flush + 36L/m³ MW-2W Mud Wash. Pump 3m³ (1.42t) Scavenger, Titanium 1400-S @ 1300Kg/m³ with 2% OGC-60 + 4% AFA-7. Pump 23.2m³ (14.57t) lead cement Titanium 1400-S @ 1400Kg/m³ with 2% OGC-60 + 4% AFA-7. Pump 17.04m³ tail cement at 1600 kg/m³ (16t) T.A.C.-S with 0.2% AFA-7 + 0.4% TWR-4 + 0.5% Gel + 0.2% TDH-2 + 0.2% CFR-12. Drop plug. Displace with 32.86m3 fresh water, Bump plug @ 5 MPa over circulating pressure and hold for 5 minutes. Bleed back & check floats, floats held with 200L back. 9mm³ good cement returns to surface. Plug down @ 01:45. Pressure test the casing to 1.4MPa low & 14MPa high for 11min each. Flush BOP, Nipple down & lift stack, install slips & seal, set slips @ 40DaN, cut casing, layout spools, install Tubing Head & X/O spool, nipple up.							
DAILY OPERATIONAL SUMMARY							
Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of Tripping handling BHA & running casing. The rig is running well with no safety or environmental issues to report. Continue to RIH from 872mKB - 1615mKB, (on bottom @ 02:30). Clean bridges @ 1030m,1366m. Condition mud & circulate hole clean, POOH from 177.8mm Csg. lay down directional assembly. Rig in powertongs & eTorque & run 131Jts, 177.8mm, 34.2Kg/m, P110, Geoconn Casing, circulate bottoms up @ 996mKB, run in casing to 1320mKB, Circulate casing in from 1320mKB - 1615mKB (on bottom @ 22:15), Condition mud & circulate hole clean.							
DAILY FORECAST							
Finish nipple up, Pressure test breaks, install wear bushing, pick up directional assembly with 159mm Reed TKC63-B1, on 6/7 Lobe, 6.4Stg Adj motor set @ 1.83deg, MWD Tool, Typhoon reamer and ball drop agitator 700 meters above the BHA. RIH, Slip & Cut drilling, drill out float & shoe, drill ahead 159mm lateral section as per Phoenix directional plan # 5							
TIMELOG					WEATHER		
FROM	TO	DUR	NPT CODE	DETAILS	TIME	TEMP	CONDITIONS
00:00	02:15	2.25 h	6A	Trip in hole, ream @ 1026m, 1365m, and wash down from 1510m to 1615m	06:00	3 °C	OVERCAST
02:15	03:30	1.25 h	5	Circulate hole clean	WIND STRENGTH		ROAD CONDITION
03:30	06:30	3.0 h	6B	Trip out of hole, flow check @ 1366m, 796m	CALM		VERY POOR
06:30	06:45	0.25 h	21	crew change handover meeting	PERSONNEL		
06:45	08:00	1.25 h	6B	continue to trip out of hole	DRILLING ENGINEER - On Site		
08:00	08:15	0.25 h	6B	Trip out of hole flow check @ 40m, 0m , trip record calc.=6.29m³, means=8.01m³, diff.= 1.72m³	Derek Rae 403-701-0899		
08:15	08:30	0.25 h	21	Safety meeting with dir. hands	DRILLING CONSULTANT - On Site		
08:30	09:30	1.0 h	20	Directional work , lay down directional tools	Mike Bowen 403-348-9127		
09:30	10:15	0.75 h	12A	Rig up/clean floor to run casing	DRILLING CONSULTANT - On Site		
10:15	10:30	0.25 h	21	Safety meeting with power tong operator	Darren Burton 780-518-7767		
10:30	16:00	5.5 h	12B	Run casing to 996m	DRILLING MANAGER - On Site		
16:00	16:15	0.25 h	5D	Circulate bottoms up	Nick Stanford 403-804-0296		
16:15	18:30	2.25 h	12B	Run casing to 1320m	MUD ADDITIVES		
18:30	18:45	0.25 h	21	crew hand over, safety meeting with tong hand	PRODUCT	AMOUNT	UNIT
18:45	22:15	3.5 h	12B	Run casing, wash in from 1320m to 1615m	BARITE	42	sacks
22:15	00:00	1.75 h	5	Condition mud & circulate	ENGINEERING	1	Chk
BOTTOM HOLE ASSEMBLY (LAST)					MUD RECORD		
#	DESCRIPTION	OD	ID	LENGTH	TIME	DEPTH	DENSITY
1	BIT	311.0 mm	0.0 mm	0.28 m	03:00	1,615.00 m	1,060.00 kg/m³
1	MUD MOTOR	175.0 mm	0.0 mm	8.88 m	VISCOSITY	WATER LOSS	FLUID pH
1	PONY SLICK COLLAR	160.0 mm	71.0 mm	4.09 m	78.00 s/l	6.00 ml/30	12
1	FLEX NMDC	160.0 mm	72.0 mm	9.18 m	PVT	SOLIDS	OIL
1	GAP SUB	163.0 mm	74.0 mm	1.66 m	25.6	-	-
1	FLEX NMDC	160.0 mm	72.0 mm	9.35 m	LOCATION		
1	JARS-HYD/MECH	165.0 mm	57.2 mm	4.8 m	shakers		
1	X/O	165.0 mm	0.71 mm	0.77 m	FUEL USE		
70	HWDP (4.5 DS40)	114.0 mm	72.0 mm	664.15 m	FUEL	USAGE	
					Marked Diesel	4,004.0 L	
BIT RECORDS					PUMPS		
#	SIZE (mm)	MANUFACTURER	TYPE	IN (m)	OUT (m)	HRS	
2	222.0	halliburton	GTD54RM	271.0	271.0	0.00 hr	Pump #1 Model
2	222.0	halliburton	GTD54RM	1,615.0	1,615.0	0.00 hr	Work Force 1300
TOTAL						0.00 hr	Pump #2 Model
							Work Force 1300
						Duplex	TRIPLEX
						SPM	120
						Pressure	4,000 kpa
						Hours Run	10.0 hr
						Liner Size	152.0 mm
						Liner Size	114.0 mm

LOCATION DATA							
NAME		LICENSE #	UWI	EVENT	AFE #	AFE \$	
BLACKSPUR HZ LEDUC-WB 16-11-51-2		0502001	100/16-11-051-02W5/00	Initial Drill	21DR0012	\$1,657,265.00	
DRILLING DATA							
EVENT	STAGE	MOVE DATE	SPUD DATE	RELEASE DATE	RIG		
Initial Drill	DRILLING	2022-01-17	2022-01-19	2022-01-30	Horizon #43		
SURVEYED	CUT / FILL	KB > GROUND	CF > GROUND	GROUND	KB ELEVATION	CF ELEVATION	
742.30 m	-0.29 m	5.50 m	0.00 m	742.01 m	747.51 m	742.01 m	
DAILY REPORT DETAILS							
REPORT DATE	DEPTH	DRILLING TIME	PROGRESS	AVG ROP	MAN HOURS	CUM. HOURS	NON-PRODUCTIVE
2022-01-22	1,615.00 m	8.25 hr	323.00 m	38.00 m/hr	132.00 hr	661.00 hr	0.00 hr
MUD		RENTALS		COSTS			
MUD	CUM. MUD	RENTALS	CUM. RENTALS	DRILLING DAILY	DRILLING TOTAL	EVENT DAILY	EVENT TOTAL
\$33,860.00	\$58,558.25	\$7,446.50	\$34,072.50	\$76,026.50	\$568,418.30	\$76,026.50	\$652,273.30
DAILY OPERATIONS							
MORNING OPERATIONS							
No safety concerns or environmental issues to report. Continue to RIH from 872mKB - 1615mKB, (on bottom @ 02:30). Clean bridges @ 1030m,1366m. Condition mud & circulate hole clean, POOH from 177.8mm Csg. Currently @ 795mKB							
DAILY OPERATIONAL SUMMARY							
Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of Drilling ahead, connections & handling chemicals. The rig is running well with no safety or environmental issues to report. Drill 159mm Build section from 1292mKB mKB - 1615mKB (Heel @ 14:30) Extrap. to Bit: 1615mKB, Inc: 85.4deg, Azm: 87.2deg, TVD: 1367.9m Circulate hole clean, back ream to KOP @ 1007mKB, Circ hole clean, POOH to surface csg shoe @ 271mKB. RIH to 872mKB. (Clean bridges @ 705m,810m,865m) Rotating ROP - 60m/hr, Sliding ROP - 30m/hr, (Sliding: 35%, Rotating: 65%) Vis- 76, Mud Wt - 1060Kg/m, Gamma - 75API, Gas - 165units. Drill into the top of Mannville formation @ 50.2deg Inc. Pump Tangent: 1431mKB - 1463mKB							
DAILY FORECAST							
Finish tripping out, Lay down directional assembly, rig in power tongs & e-Torque, run 131Jts, 177.8mm, 34.2Kg/m, P110, Geoconn Casing, condition mud & circulate hole clean, rig in Trican & cement with 90%XS, rig out cementers, nipple down, cut & dress casing, install tubing hanger, nipple up & pressure test breaks.							
TIMELOG					WEATHER		
FROM	TO	DUR	NPT CODE	DETAILS	TIME	TEMP	CONDITIONS
00:00	04:00	4.0 h	2	Drill 222mm build section from 1292m to 1420m	06:00	4 °C	OVERCAST
04:00	06:30	2.5 h	20A	Directional surveys , connections , worked pipe	WIND STRENGTH ROAD CONDITION		
06:30	06:45	0.25 h	21	crew hand over	CALM VERY POOR		
06:45	07:45	1.0 h	2	Drill 222mm build section from 1420m to 1463m	PERSONNEL		
07:45	08:00	0.25 h	7	Rig Service/ function pipe rams 5 secs to close	DRILLING ENGINEER - On Site		
08:00	11:00	3.0 h	20A	Directional surveys , connections , worked pipe	Derek Rae 403-701-0899		
11:00	14:30	3.5 h	2	Drill 222mm build section from 1463m- 1615, Pump tangent 1431mKB-1463mKB	DRILLING CONSULTANT - On Site		
14:30	15:00	0.5 h	5D	Circulate hole clean	Mike Bowen 403-348-9127		
15:00	15:15	0.25 h	7	Rig Service function test HCR 2 secs to open	DRILLING CONSULTANT - On Site		
15:15	16:00	0.75 h	6M	Wiper Trip , back ream build section to 1479m	Darren Burton 780-518-7767		
16:00	18:30	2.5 h	6M	Wiper Trip , back ream build section to 1000m	DRILLING MANAGER - On Site		
18:30	18:45	0.25 h	21	Crew hand over	Nick Stanford 403-804-0296		
18:45	19:15	0.5 h	5D	Circulate hole clean	MUD ADDITIVES		
19:15	21:30	2.25 h	6M	Wiper Trip to shoe, flow check @ 266m, hole fill meas. 4.83m³, calc. 3.69m³, diff. + 1.14m³	PRODUCT	AMOUNT	UNIT
21:30	23:45	2.25 h	6A	Trip in hole, Clean Bridges @ 705m, 810m, 865m	CONTONE	36	sacks
23:45	00:00	0.25 h	7	Rig Service/ function HCR 3 secs to close	NANOBLOK	29	sacks
BOTTOM HOLE ASSEMBLY (LAST)					PRIMO SSU	29	sacks
#	DESCRIPTION	OD	ID	LENGTH	UNISEAL	29	sacks
1	BIT	311.0 mm	0.0 mm	0.28 m	HYPERDRILL 247	1	sacks
1	MUD MOTOR	175.0 mm	0.0 mm	8.88 m	UNIPAC HVD	4	sacks
1	PONY SLICK COLLAR	160.0 mm	71.0 mm	4.09 m	UNISEAL G	29	sacks
1	FLEX NMDC	160.0 mm	72.0 mm	9.18 m	NANOBLOK G	9	sacks
1	GAP SUB	163.0 mm	74.0 mm	1.66 m	ULTRA SEAL	6	sacks
1	FLEX NMDC	160.0 mm	72.0 mm	9.35 m	PRIMA-SEAL MEDIUM	6	sacks
1	JARS-HYD/MECH	165.0 mm	57.2 mm	4.8 m	POLYZAN	7	sacks
1	X/O	165.0 mm	0.71 mm	0.77 m	ENGINEERING	1	Chk
70	HWDP (4.5 DS40)	114.0 mm	72.0 mm	664.15 m	SILICATE	12	m3
#	SIZE (mm)	MANUFACTURER	TYPE	IN (m)	OUT (m)	HRS	
2	222.0	halliburton	GTDS4RM	1,292.0	1,420.0	4.00 hr	
2	222.0	halliburton	GTDS4RM	1,420.0	1,463.0	1.00 hr	
2	222.0	halliburton	GTDS4RM	1,463.0	1,615.0	3.50 hr	
TOTAL						8.50 hr	
DRILLING PARAMETERS							
From Time	To Time	From Depth	To Depth	Activity	Rotary RPM	Weight on Bit	
00:00	04:00	1,292.0 m	1,420.0 m	DRILL	45	8.0 kdaN	
06:45	07:45	1,420.0 m	1,463.0 m	DRILL	45	10.0 kdaN	
11:00	14:30	1,463.0 m	1,615.0 m	DRILL	45	10.0 kdaN	
DEVIATION SURVEYS							
WELLBORE	MD	TVD	DEVIATION	DIRECTION	METHOD		
Original Hole	1,285.75 m	1,255.98 m	44.90°	87.10°			
Original Hole	1,295.22 m	1,262.59 m	46.60°	87.10°			
Original Hole	1,304.87 m	1,269.10 m	48.50°	87.40°			
Original Hole	1,314.34 m	1,275.41 m	48.00°	87.00°			
FUEL USE							
FUEL	USAGE						
Marked Diesel	3,852.0 L						
PUMPS							

Original Hole	1,324.00 m	1,281.84 m	48.50°	87.10°	Pump #1 Model Work Force 1300 Duplex TRIPLEX SPM 62 Pressure 12,000 kpa Hours Run 18.0 hr Liner Size 152.0 mm	Pump #2 Model Work Force 1300 Duplex TRIPLEX SPM 62 Pressure 12,000 kpa Hours Run 18.0 hr Liner Size 152.0 mm																							
Original Hole	1,333.45 m	1,288.07 m	49.10°	87.00°																									
Original Hole	1,342.94 m	1,294.17 m	50.80°	86.80°																									
Original Hole	1,352.54 m	1,300.03 m	54.00°	86.60°																									
Original Hole	1,362.01 m	1,305.34 m	57.80°	86.90°																									
Original Hole	1,371.60 m	1,310.29 m	60.00°	87.30°	HOLE CONDITION <table><tr><th>DRAG UP</th><th>DRAG DN</th><th>TORQUE</th><th>FILL</th><th>DEPTH</th></tr><tr><td>7.0 kdaN</td><td>6.0 kdaN</td><td>6,500.0 Nm</td><td>0.0 m</td><td>-</td></tr><tr><td>8.0 kdaN</td><td>8.0 kdaN</td><td>6,500.0 Nm</td><td>0.0 m</td><td>-</td></tr></table> SOLIDS CONTROL <table><tr><th>NAME</th><th>INTAKE</th><th>OVERFLOW</th><th>UNDERFLOW</th></tr><tr><td>CENTRIFUGE</td><td>1,060 kg/m³</td><td>1,040 kg/m³</td><td>1,690 kg/m³</td></tr></table>		DRAG UP	DRAG DN	TORQUE	FILL	DEPTH	7.0 kdaN	6.0 kdaN	6,500.0 Nm	0.0 m	-	8.0 kdaN	8.0 kdaN	6,500.0 Nm	0.0 m	-	NAME	INTAKE	OVERFLOW	UNDERFLOW	CENTRIFUGE	1,060 kg/m³	1,040 kg/m³	1,690 kg/m³
DRAG UP	DRAG DN	TORQUE	FILL	DEPTH																									
7.0 kdaN	6.0 kdaN	6,500.0 Nm	0.0 m	-																									
8.0 kdaN	8.0 kdaN	6,500.0 Nm	0.0 m	-																									
NAME	INTAKE	OVERFLOW	UNDERFLOW																										
CENTRIFUGE	1,060 kg/m³	1,040 kg/m³	1,690 kg/m³																										
Original Hole	1,381.16 m	1,314.98 m	61.20°	88.20°																									
Original Hole	1,390.65 m	1,319.46 m	62.50°	88.00°																									
Original Hole	1,400.13 m	1,323.65 m	65.00°	88.10°																									
Original Hole	1,409.61 m	1,327.54 m	66.60°	87.60°																									
Original Hole	1,419.06 m	1,331.21 m	67.70°	88.00°																									
Original Hole	1,428.52 m	1,334.67 m	69.30°	88.20°																									
Original Hole	1,437.98 m	1,337.95 m	70.20°	87.50°																									
Original Hole	1,447.41 m	1,341.17 m	69.80°	87.70°																									
Original Hole	1,456.90 m	1,344.47 m	69.60°	87.40°																									
Original Hole	1,466.34 m	1,347.66 m	70.80°	88.10°																									
Original Hole	1,475.84 m	1,350.58 m	73.40°	87.30°																									
Original Hole	1,485.33 m	1,353.13 m	75.50°	87.40°																									
Original Hole	1,494.99 m	1,355.40 m	77.30°	87.80°																									
Original Hole	1,504.47 m	1,357.38 m	78.60°	87.60°																									
Original Hole	1,513.92 m	1,359.14 m	79.90°	88.20°																									
Original Hole	1,523.42 m	1,360.64 m	81.90°	88.70°																									
Original Hole	1,532.90 m	1,361.83 m	83.70°	88.80°																									
Original Hole	1,542.47 m	1,362.75 m	85.30°	89.00°																									
Original Hole	1,552.12 m	1,363.36 m	87.40°	88.60°																									
Original Hole	1,561.72 m	1,363.90 m	86.20°	87.90°																									
Original Hole	1,571.24 m	1,364.54 m	86.10°	87.70°																									
Original Hole	1,580.70 m	1,365.21 m	85.80°	87.40°																									
Original Hole	1,590.17 m	1,365.91 m	85.70°	87.50°																									
Original Hole	1,599.00 m	1,366.59 m	85.40°	87.20°																									

LOCATION DATA							
NAME		LICENSE #	UWI	EVENT	AFE #	AFE \$	
BLACKSPUR HZ LEDUC-WB 16-11-51-2		0502001	100/16-11-051-02W5/00	Initial Drill	21DR0012	\$1,657,265.00	
DRILLING DATA							
EVENT	STAGE	MOVE DATE	SPUD DATE	RELEASE DATE	RIG		
Initial Drill	DRILLING	2022-01-17	2022-01-19	2022-01-30	Horizon #43		
SURVEYED	CUT / FILL	KB > GROUND	CF > GROUND	GROUND	KB ELEVATION	CF ELEVATION	
742.30 m	-0.29 m	5.50 m	0.00 m	742.01 m	747.51 m	742.01 m	
DAILY REPORT DETAILS							
REPORT DATE	DEPTH	DRILLING TIME	PROGRESS	AVG ROP	MAN HOURS	CUM. HOURS	NON-PRODUCTIVE
2022-01-21	1,292.00 m	12.50 hr	992.00 m	79.36 m/hr	132.00 hr	529.00 hr	0.00 hr
MUD		RENTALS		COSTS			
MUD	CUM. MUD	RENTALS	CUM. RENTALS	DRILLING DAILY	DRILLING TOTAL	EVENT DAILY	EVENT TOTAL
\$17,046.00	\$24,698.25	\$7,446.50	\$26,626.00	\$83,546.49	\$492,391.80	\$83,546.49	\$576,246.80
DAILY OPERATIONS							
MORNING OPERATIONS							
No safety concerns or environmental issues to report. Drill 159mm Vertical section from 1292mKB mKB - 1410mKB Rotating ROP - 60m/hr, Sliding ROP - 30m/hr, Vis- 48, Mud Wt - 1060Kg/m, Gamma - 95API, Gas - 344units. Currently 1.2 below & 1.5 Left of line Drill into the top of Mannville formation @ 50.2deg Inc.							
DAILY OPERATIONAL SUMMARY							
No safety concerns or environmental issues to report. Drill 159mm Vertical section from 300mKB mKB - 1292mKB, Rotating ROP - 100m/hr, Sliding ROP - 60m/hr, Silicate content @ 12%, Vis- 45, Mud Wt - 1050Kg/m, Gamma - 87API, Gas - 144units. KOP @ 1007mKB, Mud up @ 1100mKB. Build section last 24 hours 1007.0-1292m 280m drilled Slid 196.9m (77%) Rot 83.1m (23%) Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of Drilling ahead, connections & handling chemicals. The rig is running well with no safety or environmental issues to report.							
DAILY FORECAST							
Drill to heel ~ 1560mKB, Condition mud & circulate hole clean, back ream to KOP @ 1007mKB, trip out to shoe @ 271mKB, run/wash back to bottom, condition mud & circulate hole clean, POOH from 177.8mm Csg.							
TIMELOG					WEATHER		
FROM TO	DUR	NPT CODE	DETAILS	TIME	TEMP	CONDITIONS	
00:00 03:00	3.0 h	2	Drill 222mm hole from 300m to 640m	06:00	1 °C	PARTLY CLOUDY	
03:00 06:30	3.5 h	20A	Directional surveys, connections, work pipe	WIND STRENGTH		ROAD CONDITION	
06:30 06:45	0.25 h	21	Crew change handover meeting	UP TO 19 KM/H		VERY POOR	
06:45 07:45	1.0 h	2	Drill 222mm hole from 640 to 700m	PERSONNEL			
07:45 08:00	0.25 h	7	Rig Service/ function pipe rams 5 secs to close	DRILLING ENGINEER - On Site			
08:00 08:15	0.25 h	21A	bop drill with crew members well secure in 90 secs , discuss crew positions, kick warning signs	Derek Rae 403-701-0899			
08:15 11:45	3.5 h	2	Drill 222mm hole from 700m- 1006m	DRILLING CONSULTANT - On Site			
11:45 13:15	1.5 h	20A	Directional surveys , connections , worked pipe	Mike Bowen 403-348-9127			
13:15 13:45	0.5 h	2	Drill 222mm build section from 1006m-1082m	DRILLING CONSULTANT - On Site			
13:45 15:45	2.0 h	20A	Directional surveys ,connections , worked pipe	Darren Burton 780-518-7767			
15:45 16:00	0.25 h	7	Rig Service function test annular 17 secs to close	DRILLING MANAGER - On Site			
16:00 17:30	1.5 h	2	Drill 222mm build section from 1082m- 1158m	Nick Stanford 403-804-0296			
17:30 18:30	1.0 h	20A	Directional surveys , connections , worked pipe	MUD ADDITIVES			
18:30 18:45	0.25 h	21	crew hand over	PRODUCT			
18:45 21:45	3.0 h	2	Drill 222mm build section from 1158m - 1292m	C-107 5 sacks			
21:45 23:45	2.0 h	20A	Directional surveys, connections, work pipe	HYPERDRILL 247 2 sacks			
23:45 00:00	0.25 h	7	Rig Service/ function HCR 2 secs to open	UNIPAC HVD 6 sacks			
BOTTOM HOLE ASSEMBLY (LAST)					UNIPAC LVD 6 sacks		
#	DESCRIPTION	OD	ID	LENGTH	UNIPAC HVD 6 sacks		
1	BIT	311.0 mm	0.0 mm	0.28 m	UNIPAC LVD 2 sacks		
1	MUD MOTOR	175.0 mm	0.0 mm	8.88 m	POLYZAN 4 sacks		
1	PONY SLICK COLLAR	160.0 mm	71.0 mm	4.09 m	UNISTAR 4 sacks		
1	FLEX NMDC	160.0 mm	72.0 mm	9.18 m	ENGINEERING 1 Chk		
1	GAP SUB	163.0 mm	74.0 mm	1.66 m	SILICATE 8 m3		
1	FLEX NMDC	160.0 mm	72.0 mm	9.35 m	MUD RECORD		
1	JARS-HYD/MECH	165.0 mm	57.2 mm	4.8 m	TIME	DEPTH	DENSITY
1	X/O	165.0 mm	0.71 mm	0.77 m	01:00	816.00 m	1,050.00 kg/m³
70	HWDP (4.5 DS40)	114.0 mm	72.0 mm	664.15 m	VISCOSITY	WATER LOSS	FLUID pH
					30.00 s/l	0.00 ml/30	0
					PVT	SOLIDS	OIL
					29.4	-	-
BIT RECORDS					LOCATION SHAKERS		
#	SIZE (mm)	MANUFACTURER	TYPE	IN (m)	OUT (m)	HRS	
2	222.0 halliburton	GTD54RM	300.0	700.0	4.00 hr		TIME
2	222.0 halliburton	GTD54RM	700.0	1,082.0	4.00 hr		21:00
2	222.0 halliburton	GTD54RM	1,082.0	1,292.0	4.50 hr		DEPTH
TOTAL					12.50 hr		DENSITY
							1,050.00 kg/m³
							VISCOSITY
							WATER LOSS
							FLUID pH
							12
							OIL
							-
DRILLING PARAMETERS							
From Time	To Time	From Depth	To Depth	Activity	Rotary RPM	Weight on Bit	
00:00	04:00	300.0 m	700.0 m	DRILL	45	8.0 kdaN	
08:15	12:15	700.0 m	1,082.0 m	DRILL	45	10.0 kdaN	
16:00	20:30	1,082.0 m	1,292.0 m	DRILL	45	10.0 kdaN	
DEVIATION SURVEYS							
WELLBORE	MD	TVD	DEVIATION	DIRECTION	METHOD		
Original Hole	345.42 m	345.37 m	0.80°	293.40°			
				LOCATION SHAKER			
				SHAKER			
				FUEL USE			
				FUEL			
				USAGE			
				Marked Diesel 6,318.0 L			
				PUMPS			
				Pump #1			
				Pump #2			



Drilling Daily Report - 2022-01-21 - Day 5
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

Original Hole	402.33 m	402.27 m	0.30°	207.10°	Model	Work Force	Model	Work Force
Original Hole	459.25 m	459.19 m	0.30°	101.80°		1300		1300
Original Hole	516.39 m	516.33 m	0.60°	178.40°	Duplex	TRIPLEX	Duplex	TRIPLEX
Original Hole	573.24 m	573.18 m	0.90°	241.20°	SPM	62	SPM	62
Original Hole	630.06 m	629.99 m	1.00°	243.40°	Pressure	10,000 kpa	Pressure	10,000 kpa
Original Hole	687.16 m	687.08 m	0.70°	274.00°	Hours Run	24.0 hr	Hours Run	24.0 hr
Original Hole	744.19 m	744.11 m	0.30°	220.20°	Liner Size	152.0 mm	Liner Size	152.0 mm
Original Hole	801.31 m	801.23 m	0.50°	21.50°	HOLE CONDITION			
Original Hole	858.15 m	858.07 m	0.20°	107.90°	DRAG UP	DRAG DN	TORQUE	FILL
Original Hole	915.15 m	915.07 m	0.30°	214.20°				DEPTH
Original Hole	971.98 m	971.90 m	0.40°	226.30°	3.0 kdaN	2.0 kdaN	5,000.0 Nm	0.0 m
Original Hole	990.96 m	990.88 m	0.10°	159.60°	5.0 kdaN	4.0 kdaN	2,050.0 Nm	0.0 m
Original Hole	1,000.54 m	1,000.46 m	0.40°	247.10°	5.0 kdaN	5.0 kdaN	5,500.0 Nm	0.0 m
Original Hole	1,009.99 m	1,009.91 m	0.90°	73.10°	SOLIDS CONTROL			
Original Hole	1,019.47 m	1,019.38 m	3.10°	75.90°	NAME	INTAKE	OVERFLOW	UNDERFLOW
Original Hole	1,028.95 m	1,028.84 m	5.30°	72.30°	CENTRIFUGE	1,040 kg/m³	1,030 kg/m³	1,855 kg/m³
Original Hole	1,038.53 m	1,038.36 m	6.80°	73.90°				
Original Hole	1,048.01 m	1,047.76 m	8.00°	75.50°				
Original Hole	1,057.44 m	1,057.09 m	8.70°	79.80°				
Original Hole	1,066.91 m	1,066.44 m	9.50°	88.10°				
Original Hole	1,076.53 m	1,075.92 m	10.60°	88.30°				
Original Hole	1,086.19 m	1,085.39 m	12.00°	81.70°				
Original Hole	1,095.70 m	1,094.67 m	13.50°	82.30°				
Original Hole	1,105.16 m	1,103.84 m	14.60°	81.20°				
Original Hole	1,114.65 m	1,112.99 m	16.20°	85.80°				
Original Hole	1,124.19 m	1,122.07 m	19.50°	85.20°				
Original Hole	1,133.70 m	1,130.96 m	22.00°	85.10°				
Original Hole	1,143.20 m	1,139.69 m	24.50°	80.20°				
Original Hole	1,152.83 m	1,148.40 m	26.20°	76.40°				
Original Hole	1,162.35 m	1,156.89 m	27.40°	75.80°				
Original Hole	1,171.82 m	1,165.25 m	28.60°	74.70°				
Original Hole	1,181.30 m	1,173.52 m	30.00°	76.90°				
Original Hole	1,190.77 m	1,181.64 m	31.90°	78.50°				
Original Hole	1,200.25 m	1,189.63 m	33.20°	82.30°				
Original Hole	1,209.70 m	1,197.49 m	34.30°	87.10°				
Original Hole	1,219.26 m	1,205.32 m	35.70°	91.30°				
Original Hole	1,228.73 m	1,212.94 m	37.20°	92.60°				
Original Hole	1,238.23 m	1,220.46 m	38.20°	91.80°				
Original Hole	1,247.72 m	1,227.85 m	39.50°	91.80°				
Original Hole	1,257.30 m	1,235.17 m	40.80°	92.60°				
Original Hole	1,266.78 m	1,242.24 m	42.70°	90.60°				
Original Hole	1,276.27 m	1,249.18 m	43.40°	89.00°				

LOCATION DATA							
NAME	LICENSE #	UWI	EVENT	AFE #	AFE \$		
BLACKSPUR HZ LEDUC-WB 16-11-51-2	0502001	100/16-11-051-02W5/00	Initial Drill	21DR0012	\$1,657,265.00		
DRILLING DATA							
EVENT	STAGE	MOVE DATE	SPUD DATE	RELEASE DATE	RIG		
Initial Drill	DRILLING	2022-01-17	2022-01-19	2022-01-30	Horizon #43		
SURVEYED	CUT / FILL	KB > GROUND	CF > GROUND	GROUND	KB ELEVATION	CF ELEVATION	
742.30 m	-0.29 m	5.50 m	0.00 m	742.01 m	747.51 m	742.01 m	
DAILY REPORT DETAILS							
REPORT DATE	DEPTH	DRILLING TIME	PROGRESS	AVG ROP	MAN HOURS	CUM. HOURS	NON-PRODUCTIVE
2022-01-20	300.00 m	0.50 hr	29.00 m	58.00 m/hr	132.00 hr	397.00 hr	0.00 hr
MUD		RENTALS		COSTS			
MUD	CUM. MUD	RENTALS	CUM. RENTALS	DRILLING DAILY	DRILLING TOTAL	EVENT DAILY	EVENT TOTAL
\$6,189.75	\$7,652.25	\$7,446.50	\$19,179.50	\$151,791.64	\$408,845.31	\$151,791.64	\$492,700.31
DAILY OPERATIONS							
MORNING OPERATIONS No safety concerns or environmental issues to report. Drill 222mm Vertical section from 300mKB mKB - 630mKB Rotating ROP - 150m/Hr, Sliding ROP - 60m/Hr, Silicate content @ 12% Vis- 28, Mud Wt - 1030Kg/m, Gamma - 87API, Gas - 144units. Currently 2m North & 0.5m East.							
DAILY OPERATIONAL SUMMARY Continue to back ream out of the hole, Lay down DCs & Directional Assembly. Rig in powertongs & run 24Jts, 244.5mm, 53.7Kg/m, J55 Casing. On bottom @ 06:15. Condition mud & circ hole clean, Rig in Trican & cement casing, Pump 3m³ water, pressure test lines. Pump 15t (14.09m³)(80% XS) of TSC 1700-S Bulk Cement (1700kg/m³) with 0.4% TLA, 0.4% AFA-7, 2% Calcium Chloride. Drop plug & displace with 10.43m³ of freshwater, bump plug 5Mpa over circulation pressure, hold for 5 min., bleed off & check floats pressure test the casing to 1.4MPa low & 14MPa high for 11min each. Plug down @ 07:24, (4.5m³ good cement returns). WOC, Cut conductor & Csg, weld on bowl, nipple up & pressure test well control equipment, clean tanks, wax rig & mud tanks. Make up directional assembly with 222mm Halliburton GTD54RM on 2.12deg FXD 7/8Lobe, 5 Stage motor, RIH, drill out float & shoe @ 23:25. Drill ahead 222mm vertical section from 271mKB - 300mKB Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of running csg, cementing, nipple up, pressure testing & handling BHA. The rig is running well with no safety or environmental issues to report. Planned KOP @ 1013mKB, Planned pump tangent @ 1433mKB - 1463mKB, Planned Heel @ 1575mKB, Planned TD 4204mKB.							
DAILY FORECAST Drill ahead 222mm vertical/build section as per Phoenix Directional Plan # 4							
TIMELOG					WEATHER		
FROM	TO	DUR	NPT CODE	DETAILS	TIME	TEMP	CONDITIONS
00:00	02:00	2.0 h	3B	Back ream to tools	06:00	-10 °C	OVERCAST
02:00	02:15	0.25 h	21	Safety meeting with directional	WIND STRENGTH		ROAD CONDITION
02:15	03:15	1.0 h	20	lay out directional tools	CALM		VERY POOR
03:15	04:00	0.75 h	12A	Rig up to run casing	PERSONNEL		
04:00	04:15	0.25 h	21	Safety meeting with tonghand	DRILLING ENGINEER - On Site		
04:15	06:00	1.75 h	12B	Run 24 joints of 244.5mm 53.57kg/m J55 LT/C casing to 271mKB.	Derek Rae	403-701-0899	
06:00	06:30	0.5 h	5	Condition mud & circulate	DRILLING CONSULTANT - On Site		
06:30	06:45	0.25 h	21	crew change & Trican safety meeting	Mike Bowen	403-348-9127	
06:45	07:15	0.5 h	12	rig in cementers	DRILLING CONSULTANT - On Site		
07:15	08:00	0.75 h	12C	Pump 1m³ water. Stop & pressure tests lines to 19Mpa. Pump 2m³ dyed water, 14.08m³ (15 tonne)TSC 1700-S bulk cement with 0.4%AFA-7,0.4%TLA, 2%CaCl2. Drop plug & displace with 10.44m³ fresh water. 4.5m³ good cement returns. Plug down @ 07:24am.	Darren Burton	780-518-7767	
				Cementing,flush conductor, rig out cementers	DRILLING MANAGER - On Site		
					Nick Stanford	403-804-0296	
					MUD ADDITIVES		
					PRODUCT	AMOUNT	UNIT
08:00	09:00	1.0 h	12C	Cementing,flush conductor, rig out cementers	POTASSIUM CARBONATE	7	sacks
09:00	10:15	1.25 h	14C	prepare to cut conductor	ENGINEERING	1	Chk
10:15	12:30	2.25 h	25	cut conductor and casing, clean cut on casing weld on bowl	SILICATE	5	m3
12:30	14:30	2.0 h	14B	Nipple down BOPs	FUEL USE		
14:30	14:45	0.25 h	21	Safety meeting with pressure tester	FUEL	USAGE	
14:45	16:00	1.25 h	15A	Pressure test kill line ,, manual valve , manifold valves @ 14000kpa	Marked Diesel	3,662.0 L	
16:00	18:30	2.5 h	15A	Pressure test BOPs annular , pipe rams , blind rams, hcr @ 14000kpa	PUMPS		
18:30	18:45	0.25 h	21	crew hand over	Pump #1	Work Force	Pump #2
18:45	19:00	0.25 h	15B	Function test BOPs start press. 19000kpa, annular 17 secs to close , 7800kpa loss press. / pipe rams 5 secs to close , 2100kpa loss press. / HCR 2 secs to open , 100kpa loss press. / remaining press. 9200kpa, time to recharge 1min, 59secs, function test motor kills ,pre-charge =6800kpa, N2 bottles #1=2400 2400psi, #2=2400psi,#3=2500psi,#4=2400psi	Model	1300	Model
					Duplex	TRIPLEX	Duplex
					SPM	54	SPM
					Pressure	6,000 kpa	Pressure
					Hours Run	5.0 hr	Hours Run
					Liner Size	152.0 mm	Liner Size
					HOLE CONDITION		
					DRAG UP	DRAG DN	TORQUE
					1.0 kdaN	1.0 kdaN	4,000.0 Nm
					FILL	DEPTH	
					0.0 m		-
BOTTOM HOLE ASSEMBLY (LAST)							
#	DESCRIPTION	OD	ID	LENGTH			
1	BIT	311.0 mm	0.0 mm	0.28 m			
1	MUD MOTOR	175.0 mm	0.0 mm	8.88 m			
1	PONY SLICK COLLAR	160.0 mm	71.0 mm	4.09 m			
1	FLEX NMDC	160.0 mm	72.0 mm	9.18 m			
1	GAP SUB	163.0 mm	74.0 mm	1.66 m			
1	FLEX NMDC	160.0 mm	72.0 mm	9.35 m			
1	JARS-HYD/MECH	165.0 mm	57.2 mm	4.8 m			
1	X/O	165.0 mm	0.71 mm	0.77 m			
27	HWDP (4.5 DS40)	114.0 mm	72.0 mm	255.94 m			



Drilling Daily Report - 2022-01-20 - Day 4
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

BIT RECORDS						
#	SIZE (mm)	MANUFACTURER	TYPE	IN (m)	OUT (m)	HRS
2	222.0	halliburton	GTD54RM	271.0	300.0	0.50 hr
TOTAL						0.50 hr
DRILLING PARAMETERS						
From Time	To Time	From Depth	To Depth	Activity	Rotary RPM	Weight on Bit
23:30	00:00	271.0 m	300.0 m	DRILL	20	7.0 kdaN

LOCATION DATA							
NAME		LICENSE #	UWI	EVENT	AFE #	AFE \$	
BLACKSPUR HZ LEDUC-WB 16-11-51-2		0502001	100/16-11-051-02W5/00	Initial Drill	21DR0012	\$1,657,265.00	
DRILLING DATA							
EVENT	STAGE	MOVE DATE	SPUD DATE	RELEASE DATE	RIG		
Initial Drill	DRILLING	2022-01-17	2022-01-19	2022-01-30	Horizon #43		
SURVEYED	CUT / FILL	KB > GROUND	CF > GROUND	GROUND	KB ELEVATION	CF ELEVATION	
742.30 m	-0.29 m	5.50 m	0.00 m	742.01 m	747.51 m	742.01 m	
DAILY REPORT DETAILS							
REPORT DATE	DEPTH	DRILLING TIME	PROGRESS	AVG ROP	MAN HOURS	CUM. HOURS	NON-PRODUCTIVE
2022-01-19	271.00 m	2.75 hr	251.00 m	91.27 m/hr	132.00 hr	265.00 hr	0.00 hr
MUD		RENTALS		COSTS			
MUD	CUM. MUD	RENTALS	CUM. RENTALS	DRILLING DAILY	DRILLING TOTAL	EVENT DAILY	EVENT TOTAL
\$1,462.50	\$1,462.50	\$6,496.50	\$11,733.00	\$66,916.00	\$257,053.67	\$66,916.00	\$340,908.67
DAILY OPERATIONS							
MORNING OPERATIONS No safety concerns or environmental issues to report. Continue to back ream out of hole, Lay down DCs & Directional Assembly. Rig in powertongs & run 24Jts, 244.5mm, 53.7Kg/m, J55 Casing. On bottom @ 06:15							
DAILY OPERATIONAL SUMMARY Continue to rig up to spud. Rig in mud tanks, pumps, pick up & rig in the top drive, weld on conductor barrel, de-icing equipment, rig up bails and elevators, tongs, flare, and degasser lines to manifold shack, set up pipe arms, load on BHA/strap, rig in mud tanks/fill mud tanks. Hold pre-spud safety meetings with all personnel on location. Spud @ 16:00, drill 311mm surface hole from 20mKB - 271mKB, (Trace amount of coal @ 60m)(TD @ 21:45), condition mud & circulate hole clean, back ream out of hole. AER notification ID 1040129. Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations rigging up & drilling 311mm surface hole, tripping & handling BHA. The rig is running well with no safety or environmental issues to report.							
DAILY FORECAST Condition mud & circ hole clean, cement with Trican,(15tonne)(80%xs) WOC, Cut conductor & Csg, weld on bowl, nipple up & pressure test well control equipment, clean tanks, make up directional assembly with 2.12deg FXD 7/8Lobe, 5 Stage motor, RIH, slip & cut drill line, drill out float & shoe, drill ahead 222mm vertical/build section. Planned KOP @ 1013mKB, Planned Heel @ 1575mKB, Planned TD 4204mKB.							
TIMELOG					WEATHER		
FROM	TO	DUR	NPT CODE	DETAILS	TIME	TEMP	CONDITIONS
00:00	05:00	5.0 h	1B	Rig up top drive	06:00	-29 °C	CLEAR
05:00	06:30	1.5 h	25	Pick up and weld on conductor	WIND STRENGTH		ROAD CONDITION
06:30	06:45	0.25 h	21	crew hand oover	CALM		VERY POOR
06:45	08:00	1.25 h	1	continue rig up,	PERSONNEL		
08:00	12:45	4.75 h	1	Continue to rig up/ de-ice equipment, rig up bails and elevators, tongs, flare and degasser lines to manifold shack, set up pipe arms, load on bha/ strap, rig in mud tanks/ fill mud tanks	DRILLING ENGINEER - On Site Derek Rae 403-701-0899 DRILLING CONSULTANT - On Site Mike Bowen 403-348-9127 DRILLING CONSULTANT - On Site Darren Burton 780-518-7767 DRILLING MANAGER - On Site Nick Stanford 403-804-0296		
12:45	13:00	0.25 h	21F	safety meeting held with directional, RM and company rep	MUD ADDITIVES		
13:00	14:30	1.5 h	20D	make up directional tools	PRODUCT	AMOUNT	UNIT
14:30	14:45	0.25 h	21	Safety meeting/crew hand over with RM and company rep	SAWDUST	75	sacks
14:45	15:45	1.0 h	1	Rig up mud tanks, pre-mix gel chem,	BENTONITE	40	sacks
15:45	16:00	0.25 h	21	Pre-spud Safety meeting held with RM and company rep	TKPP	5	sacks
16:00	17:15	1.25 h	2	Spud 311mm surface hole From 20m to 113m	MUD RECORD		
17:15	18:30	1.25 h	20A	Directional surveys , connections , worked pipe	TIME	DEPTH	DENSITY
18:30	18:45	0.25 h	21	crew hand over	22:30	0.00 m	1,090.00 kg/m³
18:45	20:15	1.5 h	2	Drill 311mm surface hole from 113m- 271m	VISCOSITY	WATER LOSS	FLUID pH
20:15	21:45	1.5 h	20A	Directional surveys, connections, work pipe	82.00 s/l	0.00 ml/30	0
21:45	22:45	1.0 h	5D	Circulate and Condition	PVT	SOLIDS	OIL
22:45	00:00	1.25 h	3B	Backream up to tools	0	-	-
BOTTOM HOLE ASSEMBLY (LAST)					LOCATION		
#	DESCRIPTION	OD	ID	LENGTH			
1	BIT	311.0 mm	0.0 mm	0.3 m			
1	MUD MOTOR	205.0 mm	0.0 mm	8.55 m			
1	X/O BELL SUB	199.0 mm	77.0 mm	0.81 m			
1	PONY SLICK COLLAR	160.0 mm	71.0 mm	4.09 m			
1	FLEX NMDC	160.0 mm	72.0 mm	9.18 m			
1	GAP SUB	163.0 mm	74.0 mm	1.66 m			
1	FLEX NMDC	160.0 mm	72.0 mm	9.35 m			
2	DC (6.25 IN)	165.0 mm	57.2 mm	18.38 m			
1	JARS-HYD/MECH	165.0 mm	57.2 mm	4.8 m			
4	DC (6.25 IN)	165.0 mm	57.2 mm	37.06 m			
1	X/O	165.0 mm	58.0 mm	0.77 m			
18	HWDP (4.5 DS40)	114.2 mm	68.2 mm	170.6 m			
BIT RECORDS					FUEL USE		
#	SIZE (mm)	MANUFACTURER	TYPE	IN (m)	OUT (m)	HRS	
1	311.0	DRILFORMANCE	DF519XM	20.0	113.0	1.25 hr	
1	311.0	DRILFORMANCE	DF519XM	113.0	271.0	1.50 hr	
TOTAL						2.75 hr	
DRILLING PARAMETERS							
From Time	To Time	From Depth	To Depth	Activity	Rotary RPM	Weight on Bit	
16:00	17:15	20.0 m	113.0 m	DRILL	45	7.0 kdaN	
18:45	20:15	113.0 m	271.0 m	DRILL	45	8.0 kdaN	
DEVIATION SURVEYS							
WELLBORE	MD	TVD	DEVIATION	DIRECTIONMETHOD			
Original Hole	0.00 m	0.00 m	0.00°	0.00°			
Original Hole	5.50 m	5.50 m	0.00°	0.00°			
HOLE CONDITION							
DRAG UP	DRAG DN	TORQUE	FILL	DEPTH			
2.0 kdaN	2.0 kdaN	6,500.0 Nm	0.0 m	-			



Drilling Daily Report - 2022-01-19 - Day 3
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

Original Hole	36.32 m	36.32 m	0.40°	72.60°
Original Hole	58.62 m	58.62 m	1.00°	42.50°
Original Hole	77.95 m	77.94 m	1.20°	52.00°
Original Hole	96.80 m	96.79 m	1.50°	47.50°
Original Hole	115.68 m	115.66 m	1.80°	48.90°
Original Hole	134.56 m	134.54 m	1.00°	58.10°
Original Hole	153.68 m	153.65 m	0.90°	34.70°
Original Hole	172.60 m	172.57 m	0.90°	67.80°
Original Hole	191.58 m	191.55 m	0.40°	333.70°
Original Hole	210.62 m	210.59 m	0.80°	294.80°
Original Hole	229.59 m	229.56 m	1.30°	304.28°
Original Hole	248.50 m	248.46 m	1.20°	301.50°

LOCATION DATA							
NAME		LICENSE #	UWI	EVENT	AFE #	AFE \$	
BLACKSPUR HZ LEDUC-WB 16-11-51-2		0502001	100/16-11-051-02W5/00	Initial Drill	21DR0012	\$1,657,265.00	
DRILLING DATA							
EVENT	STAGE	MOVE DATE	SPUD DATE	RELEASE DATE	RIG		
Initial Drill	DRILLING	2022-01-17	2022-01-19	2022-01-30	Horizon #43		
SURVEYED	CUT / FILL	KB > GROUND	CF > GROUND	GROUND	KB ELEVATION	CF ELEVATION	
742.30 m	-0.29 m	5.50 m	0.00 m	742.01 m	747.51 m	742.01 m	
DAILY REPORT DETAILS							
REPORT DATE	DEPTH	DRILLING TIME	PROGRESS	AVG ROP	MAN HOURS	CUM. HOURS	NON-PRODUCTIVE
2022-01-18	0.00 m	0.00 hr	0.00 m	0.00 m/hr	100.00 hr	133.00 hr	0.00 hr
MUD		RENTALS	COSTS				
MUD	CUM. MUD	RENTALS	CUM. RENTALS	DRILLING DAILY	DRILLING TOTAL	EVENT DAILY	EVENT TOTAL
\$0.00	\$0.00	\$4,736.50	\$5,236.50	\$48,785.17	\$190,137.67	\$48,785.17	\$273,992.67
DAILY OPERATIONS							
MORNING OPERATIONS No safety concerns or environmental issues to report. Continue to rig up to spud. Rig in mud tanks, pumps, pick up & rig in the top drive, weld on conductor barrel. (Extreme cold temperature -41)							
DAILY OPERATIONAL SUMMARY Continue to haul Rig & Rental loads to location, spot loads & rig up to spud. Hook up steam, water & hydraulic lines, raise derrick. (Trucks off location @ 17:45). Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of rig move to rig up & driving in winter conditions. The rig is running well with no safety or environmental issues to report.							
DAILY FORECAST Continue to rig up, make up directional assembly. Hold pre-spud safety meeting with all personal on location. Spud & drill 311mm surface hole to ~ 265mKB with DF519 on a 1.5 degree ADJ 7/8 lobe 4.0 stage motor, Circ hole clean, back ream out of hole, lay down directional assembly.							
TIMELOG					WEATHER		
FROM	TO	DUR	NPT CODE	DETAILS	TIME	TEMP	CONDITIONS
00:00	07:45	7.75 h	23B	Wait on Daylight & rig loads to finnish off rig move	06:00	2 °C	SNOW
07:45	08:00	0.25 h	21D	Pre-job safety with truckers	WIND STRENGTH		ROAD CONDITION
08:00	15:00	7.0 h	1	Rig up cords & air lines & fuel lines & hydraulic line & raise derrick	CALM		VERY POOR
15:00	16:00	1.0 h	1C	Spot rig/loads/buildings	PERSONNEL		
16:00	17:00	1.0 h	1C	Spot rig/loads/buildings & rental loads	DRILLING ENGINEER - On Site		
17:00	18:30	1.5 h	1	Rig up hook up steam lines & water lines & cords to rest of rig	Derek Rae 403-701-0899		
18:30	18:45	0.25 h	21	Safety meeting crew hand over	DRILLING CONSULTANT - On Site		
18:45	00:00	5.25 h	1	Rig up, run steam around rig, get water circulating around rig	Mike Bowen 403-348-9127		
					DRILLING CONSULTANT - On Site		
					Darren Burton 780-518-7767		
					DRILLING MANAGER - On Site		
					Nick Stanford 403-804-0296		
FUEL USE							
FUEL					USAGE		
Marked Diesel					3,240.0 L		
PUMPS							
Pump #1					Pump #2		
Model		Work Force			Model		Work Force
		1300					1300
Duplex		TRIPLEX			Duplex		TRIPLEX
SPM					SPM		
Pressure	-				Pressure	-	
Hours Run	-				Hours Run	-	
Liner Size	-				Liner Size	-	

LOCATION DATA							
NAME		LICENSE #	UWI	EVENT	AFE #	AFE \$	
BLACKSPUR HZ LEDUC-WB 16-11-51-2		0502001	100/16-11-051-02W5/00	Initial Drill	21DR0012	\$1,657,265.00	
DRILLING DATA							
EVENT	STAGE	MOVE DATE	SPUD DATE	RELEASE DATE	RIG		
Initial Drill	DRILLING	2022-01-17	2022-01-19	2022-01-30	Horizon #43		
SURVEYED	CUT / FILL	KB > GROUND	CF > GROUND	GROUND	KB ELEVATION	CF ELEVATION	
742.30 m	-0.29 m	5.50 m	0.00 m	742.01 m	747.51 m	742.01 m	
DAILY REPORT DETAILS							
REPORT DATE	DEPTH	DRILLING TIME	PROGRESS	AVG ROP	MAN HOURS	CUM. HOURS	NON-PRODUCTIVE
2022-01-17	0.00 m	0.00 hr	0.00 m	0.00 m/hr	33.00 hr	33.00 hr	0.00 hr
MUD		RENTALS		COSTS			
MUD	CUM. MUD	RENTALS	CUM. RENTALS	DRILLING DAILY	DRILLING TOTAL	EVENT DAILY	EVENT TOTAL
\$0.00	\$0.00	\$500.00	\$500.00	\$141,352.50	\$141,352.50	\$141,352.50	\$225,207.50
DAILY OPERATIONS							
MORNING OPERATIONS No safety concerns or environmental issues to report. Wait on daylight f/ trucks to spot remaining loads							
DAILY OPERATIONAL SUMMARY Haul Rig & Rental loads to location, spot matting, sub & derrick, shut down & wait on daylight to spot remaining loads. Discussed with CVE Calgary Drilling Superintendent Derek Rae upcoming days operations of rig move to rig up & driving in winter conditions. The rig is running well with no safety or environmental issues to report.							
DAILY FORECAST Spot remaining loads, rig up, spud & drill 311mm surface hole.							
TIMELOG				WEATHER			
No Time Log entries to display.				TIME	TEMP	CONDITIONS	
				WIND STRENGTH		ROAD CONDITION	
				PERSONNEL			
				DRILLING ENGINEER - On Site			
				Derek Rae 403-701-0899			
				DRILLING CONSULTANT - On Site			
				Mike Bowen 403-348-9127			
				DRILLING CONSULTANT - On Site			
				Darren Burton 780-518-7767			
				DRILLING MANAGER - On Site			
				Nick Stanford 403-804-0296			
				PUMPS			
Pump #1		Pump #2					
Model	Work Force	Model	Work Force				
	1300		1300				
Duplex	TRIPLEX	Duplex	TRIPLEX				
SPM		SPM					
Pressure	-	Pressure	-				
Hours Run	-	Hours Run	-				
Liner Size	-	Liner Size	-				



Section 3

Mud Inventory, Usage & Costs



Mud Inventory
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

WELL DATA					
NAME	LICENSE #	LOCATION	EVENT	AFE NUMBER	AFE AMOUNT
BLACKSPUR HZ LEDUC-WB 16-11-51-2	0502001		Initial Drill	21DR0012	\$1,657,265.00

MUD COMPANIES	
MUD COMPANY	TRUCKING COMPANY
Uniq Energy Solutions	GMack
ENVIRONMENTAL COMPANY	VACUUM TRUCK
Secure	Fluid In Motion

INVENTORY					
PRODUCT	DELIVERED	USED	REMAINING	UNIT PRICE	TOTAL COST
ALL-LOCK	10	0	10	\$49.00	\$0.00
BARITE	0	162	-162	\$22.30	\$3,612.60
BENTONITE	0	40	-40	\$12.25	\$490.00
BKE	0	0	0	\$205.00	\$0.00
BLEACH	0	0	0	\$63.00	\$0.00
BLOK	0	0	0	\$0.00	\$0.00
C 107 FLOC POLYMER	0	0	0	\$0.00	\$0.00
C-107	0	5	-5	\$280.00	\$1,400.00
CALCIUM CARBONATE 0	0	0	0	\$7.25	\$0.00
CALCIUM CARBONATE 325	0	0	0	\$7.75	\$0.00
CALCIUM CARBONATE PG	0	0	0	\$7.25	\$0.00
CALCIUM CARBONATE SUPER CAL	0	0	0	\$7.50	\$0.00
CALCIUM CHLORIDE	0	0	0	\$35.00	\$0.00
CELLOPHANE	0	0	0	\$51.95	\$0.00
CONTONE	0	36	-36	\$155.00	\$5,580.00
DI-SPERSE	0	0	0	\$163.43	\$0.00
ELIXIR	0	12	-12	\$1,865.00	\$22,380.00
ENGINEERING	0	9	-9	\$600.00	\$5,400.00
ENVIROBAGS	0	0	0	\$50.00	\$0.00
EXIXIR	0	0	0	\$0.00	\$0.00
GRAPHITE	0	177	-177	\$75.73	\$13,404.21
GYPSUM	0	0	0	\$14.12	\$0.00
HUMALITE	0	42	-42	\$13.70	\$575.40
HYPERDRILL AF 204RD	0	0	0	\$180.00	\$0.00
HYPERDRILL 247	0	3	-3	\$220.00	\$660.00
HYPERDRILL AF 247RD	0	0	0	\$220.00	\$0.00
LIGNITE	0	0	0	\$13.70	\$0.00
LUBRAGLIDE BEADS C	0	0	0	\$200.00	\$0.00
MUD CHECK	0	0	0	\$550.00	\$0.00
NANOBLOK	0	29	-29	\$105.00	\$3,045.00
NANOBLOK G	0	9	-9	\$105.00	\$945.00
NUT SHELL M	0	0	0	\$22.50	\$0.00
PALLETS	0	0	0	\$15.00	\$0.00
PH DROP	0	16	-16	\$90.00	\$1,440.00
POLYZAN	0	13	-13	\$380.00	\$4,940.00
POTASSIUM CARBONATE	0	7	-7	\$84.25	\$589.75
POTASSIUM SILICATE	0	0	0	\$945.00	\$0.00
PRIMA-SEAL MEDIUM	0	6	-6	\$50.00	\$300.00
PRIMO SSU	0	29	-29	\$67.00	\$1,943.00
PRIMOSSU	0	0	0	\$0.00	\$0.00
SAWDUST	0	75	-75	\$4.50	\$337.50
SHRINKWRAP	0	20	-20	\$20.00	\$400.00
SILICATE	0	25	-25	\$1,000.00	\$25,000.00
SOAP STICK	0	0	0	\$6.50	\$0.00
SUNBURST BEADS	0	0	0	\$0.00	\$0.00
SUNBURST DP	0	50	-50	\$110.00	\$5,500.00
SUPER SWEEP	0	0	0	\$215.25	\$0.00
TKPP	0	5	-5	\$127.00	\$635.00
ULTRA SEAL	0	6	-6	\$90.00	\$540.00
UNIBRITE	0	0	0	\$175.00	\$0.00
UNIPAC HVD	0	24	-24	\$238.00	\$5,712.00
UNIPAC HVD HIGH VIS	0	0	0	\$0.00	\$0.00
UNIPAC LVD	0	33	-33	\$218.00	\$7,194.00
UNIPAC LVD LOW VIS	0	0	0	\$0.00	\$0.00
UNISEAL	0	29	-29	\$90.00	\$2,610.00
UNISEAL G	0	29	-29	\$85.00	\$2,465.00
UNISTAR	0	32	-32	\$121.50	\$3,888.00
WALNUTS	0	69	-69	\$22.50	\$1,552.50
WAX ON	0	0	0	\$268.30	\$0.00
WYOMING GEL	0	0	0	\$0.00	\$0.00



INVENTORY					
ZAN HD	0	0	0	\$280.00	\$0.00



Daily Mud Breakdown - Daily Cost
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

WELL DATA					
NAME	LICENSE #	LOCATION	EVENT	AFE NUMBER	AFE AMOUNT
BLACKSPUR HZ LEDUC-WB 16-11-51-2	0502001	LEDUC-WB AB, Canada	Initial Drill	21DR0012	\$1,657,265.00

DAILY COST									
MUD PRODUCT	01-17	01-18	01-19	01-20	01-21	01-22	01-23	WEEK TOTAL	RUN. TOTAL
ALL-LOCK	-	-	-	-	-	-	-	0	0
BARITE	-	-	-	-	-	-	42	42	42
BENTONITE	-	-	40	-	-	-	-	40	40
BKE	-	-	-	-	-	-	-	0	0
BLEACH	-	-	-	-	-	-	-	0	0
BLOK	-	-	-	-	-	-	-	0	0
C 107 FLOC POLYMER	-	-	-	-	-	-	-	0	0
C-107	-	-	-	-	5	-	-	5	5
CALCIUM CARBONATE 0	-	-	-	-	-	-	-	0	0
CALCIUM CARBONATE 325	-	-	-	-	-	-	-	0	0
CALCIUM CARBONATE PG	-	-	-	-	-	-	-	0	0
CALCIUM CARBONATE SUPER CAL	-	-	-	-	-	-	-	0	0
CALCIUM CHLORIDE	-	-	-	-	-	-	-	0	0
CELLOPHANE	-	-	-	-	-	-	-	0	0
CONTONE	-	-	-	-	-	36	-	36	36
DI-SPERSE	-	-	-	-	-	-	-	0	0
ELIXIR	-	-	-	-	-	-	-	0	0
ENGINEERING	-	-	-	1	1	1	1	4	4
ENVIROBAGS	-	-	-	-	-	-	-	0	0
EXIXIR	-	-	-	-	-	-	-	0	0
GRAPHITE	-	-	-	-	-	-	-	0	0
GYPSUM	-	-	-	-	-	-	-	0	0
HUMALITE	-	-	-	-	-	-	-	0	0
HYPERDRILL AF 204RD	-	-	-	-	-	-	-	0	0
HYPERDRILL 247	-	-	-	-	2	1	-	3	3
HYPERDRILL AF 247RD	-	-	-	-	-	-	-	0	0
LIGNITE	-	-	-	-	-	-	-	0	0
LUBRAGLIDE BEADS C	-	-	-	-	-	-	-	0	0
MUD CHECK	-	-	-	-	-	-	-	0	0
NANOBLOK	-	-	-	-	-	29	-	29	29
NANOBLOK G	-	-	-	-	-	9	-	9	9
NUT SHELL M	-	-	-	-	-	-	-	0	0
PALLETS	-	-	-	-	-	-	-	0	0
PH DROP	-	-	-	-	-	-	-	0	0
POLYZAN	-	-	-	-	4	7	-	11	11
POTASSIUM CARBONATE	-	-	-	7	-	-	-	7	7
POTASSIUM SILICATE	-	-	-	-	-	-	-	0	0
PRIMA-SEAL MEDIUM	-	-	-	-	-	6	-	6	6
PRIMO SSU	-	-	-	-	-	29	-	29	29
PRIMOSSU	-	-	-	-	-	-	-	0	0
SAWDUST	-	-	75	-	-	-	-	75	75
SHRINKWRAP	-	-	-	-	-	-	-	0	0
SILICATE	-	-	-	5	8	12	-	25	25
SOAP STICK	-	-	-	-	-	-	-	0	0
SUNBURST BEADS	-	-	-	-	-	-	-	0	0
SUNBURST DP	-	-	-	-	-	-	-	0	0
SUPER SWEEP	-	-	-	-	-	-	-	0	0



Daily Mud Breakdown - Daily Cost
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

DAILY COST									
TKPP	-	-	5	-	-	-	-	5	5
ULTRA SEAL	-	-	-	-	-	6	-	6	6
UNIBRITE	-	-	-	-	-	-	-	0	0
UNIPAC HVD	-	-	-	-	6	4	-	10	10
UNIPAC HVD HIGH VIS	-	-	-	-	-	-	-	0	0
UNIPAC LVD	-	-	-	-	2	-	-	2	2
UNIPAC LVD LOW VIS	-	-	-	-	-	-	-	0	0
UNISEAL	-	-	-	-	-	29	-	29	29
UNISEAL G	-	-	-	-	-	29	-	29	29
UNISTAR	-	-	-	-	4	-	-	4	4
WALNUTS	-	-	-	-	-	-	-	0	0
WAX ON	-	-	-	-	-	-	-	0	0
WYOMING GEL	-	-	-	-	-	-	-	0	0
ZAN HD	-	-	-	-	-	-	-	0	0
DAILY TOTAL	\$0.00	\$0.00	\$1,462.50	\$6,189.75	\$17,046.00	\$33,860.00	\$1,536.60	\$60,094.85	
RUNNING TOTAL	\$0.00	\$0.00	\$1,462.50	\$7,652.25	\$24,698.25	\$58,558.25	\$60,094.85		\$60,094.85



Daily Mud Breakdown - Daily Cost
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

WELL DATA					
NAME	LICENSE #	LOCATION	EVENT	AFE NUMBER	AFE AMOUNT
BLACKSPUR HZ LEDUC-WB 16-11-51-2	0502001	LEDUC-WB AB, Canada	Initial Drill	21DR0012	\$1,657,265.00

DAILY COST									
MUD PRODUCT	01-24	01-25	01-26	01-27	01-28	01-29	01-30	WEEK TOTAL	RUN. TOTAL
ALL-LOCK	-	-	-	-	-	-	-	0	0
BARITE	20	-	-	50	50	-	-	120	162
BENTONITE	-	-	-	-	-	-	-	0	40
BKE	-	-	-	-	-	-	-	0	0
BLEACH	-	-	-	-	-	-	-	0	0
BLOK	-	-	-	-	-	-	-	0	0
C 107 FLOC POLYMER	-	-	-	-	-	-	-	0	0
C-107	-	-	-	-	-	-	-	0	5
CALCIUM CARBONATE 0	-	-	-	-	-	-	-	0	0
CALCIUM CARBONATE 325	-	-	-	-	-	-	-	0	0
CALCIUM CARBONATE PG	-	-	-	-	-	-	-	0	0
CALCIUM CARBONATE SUPER CAL	-	-	-	-	-	-	-	0	0
CALCIUM CHLORIDE	-	-	-	-	-	-	-	0	0
CELLOPHANE	-	-	-	-	-	-	-	0	0
CONTONE	-	-	-	-	-	-	-	0	36
DI-SPERSE	-	-	-	-	-	-	-	0	0
ELIXIR	-	-	-	-	12	-	-	12	12
ENGINEERING	1	1	1	1	1	-	-	5	9
ENVIROBAGS	-	-	-	-	-	-	-	0	0
EXIXIR	-	-	-	-	-	-	-	0	0
GRAPHITE	-	28	55	45	49	-	-	177	177
GYPSUM	-	-	-	-	-	-	-	0	0
HUMALITE	-	-	20	22	-	-	-	42	42
HYPERDRILL AF 204RD	-	-	-	-	-	-	-	0	0
HYPERDRILL 247	-	-	-	-	-	-	-	0	3
HYPERDRILL AF 247RD	-	-	-	-	-	-	-	0	0
LIGNITE	-	-	-	-	-	-	-	0	0
LUBRAGLIDE BEADS C	-	-	-	-	-	-	-	0	0
MUD CHECK	-	-	-	-	-	-	-	0	0
NANOBLOK	-	-	-	-	-	-	-	0	29
NANOBLOK G	-	-	-	-	-	-	-	0	9
NUT SHELL M	-	-	-	-	-	-	-	0	0
PALLETS	-	-	-	-	-	-	-	0	0
PH DROP	16	-	-	-	-	-	-	16	16
POLYZAN	-	-	-	2	-	-	-	2	13
POTASSIUM CARBONATE	-	-	-	-	-	-	-	0	7
POTASSIUM SILICATE	-	-	-	-	-	-	-	0	0
PRIMA-SEAL MEDIUM	-	-	-	-	-	-	-	0	6
PRIMO SSU	-	-	-	-	-	-	-	0	29
PRIMOSSU	-	-	-	-	-	-	-	0	0
SAWDUST	-	-	-	-	-	-	-	0	75
SHRINKWRAP	-	-	-	-	20	-	-	20	20
SILICATE	-	-	-	-	-	-	-	0	25
SOAP STICK	-	-	-	-	-	-	-	0	0
SUNBURST BEADS	-	-	-	-	-	-	-	0	0
SUNBURST DP	-	-	-	-	50	-	-	50	50
SUPER SWEEP	-	-	-	-	-	-	-	0	0



Daily Mud Breakdown - Daily Cost
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

DAILY COST										
TKPP	-	-	-	-	-	-	-	-	0	5
ULTRA SEAL	-	-	-	-	-	-	-	-	0	6
UNIBRITE	-	-	-	-	-	-	-	-	0	0
UNIPAC HVD	4	2	2	-	-	-	-	-	8	18
UNIPAC HVD HIGH VIS	-	-	-	-	-	-	-	-	0	0
UNIPAC LVD	-	3	7	15	-	-	-	-	25	27
UNIPAC LVD LOW VIS	-	-	-	-	-	-	-	-	0	0
UNISEAL	-	-	-	-	-	-	-	-	0	29
UNISEAL G	-	-	-	-	-	-	-	-	0	29
UNISTAR	4	6	7	11	-	-	-	-	28	32
WALNUTS	-	8	33	22	6	-	-	-	69	69
WAX ON	-	-	-	-	-	-	-	-	0	0
WYOMING GEL	-	-	-	-	-	-	-	-	0	0
ZAN HD	-	-	-	-	-	-	-	-	0	0
DAILY TOTAL	\$3,924.00	\$4,759.44	\$8,634.15	\$11,285.75	\$33,840.77	\$0.00	\$0.00	\$62,444.11		
RUNNING TOTAL	\$64,018.85	\$68,778.29	\$77,412.44	\$88,698.19	\$122,538.96	\$122,538.96	\$122,538.96			\$122,538.96



Daily Mud Breakdown - Daily Cost
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

WELL DATA					
NAME	LICENSE #	LOCATION	EVENT	AFE NUMBER	AFE AMOUNT
BLACKSPUR HZ LEDUC-WB 16-11-51-2	0502001	LEDUC-WB AB, Canada	Initial Drill	21DR0012	\$1,657,265.00

DAILY COST				
MUD PRODUCT	01-31		WEEK TOTAL	RUN. TOTAL
ALL-LOCK	-		0	0
BARITE	-		0	162
BENTONITE	-		0	40
BKE	-		0	0
BLEACH	-		0	0
BLOK	-		0	0
C 107 FLOC POLYMER	-		0	0
C-107	-		0	5
CALCIUM CARBONATE 0	-		0	0
CALCIUM CARBONATE 325	-		0	0
CALCIUM CARBONATE PG	-		0	0
CALCIUM CARBONATE SUPER CAL	-		0	0
CALCIUM CHLORIDE	-		0	0
CELLOPHANE	-		0	0
CONTONE	-		0	36
DI-SPERSE	-		0	0
ELIXIR	-		0	12
ENGINEERING	-		0	9
ENVIROBAGS	-		0	0
EXIXIR	-		0	0
GRAPHITE	-		0	177
GYPSUM	-		0	0
HUMALITE	-		0	42
HYPERDRILL AF 204RD	-		0	0
HYPERDRILL 247	-		0	3
HYPERDRILL AF 247RD	-		0	0
LIGNITE	-		0	0
LUBRAGLIDE BEADS C	-		0	0
MUD CHECK	-		0	0
NANOBLOK	-		0	29
NANOBLOK G	-		0	9
NUT SHELL M	-		0	0
PALLETS	-		0	0
PH DROP	-		0	16
POLYZAN	-		0	13
POTASSIUM CARBONATE	-		0	7
POTASSIUM SILICATE	-		0	0
PRIMA-SEAL MEDIUM	-		0	6
PRIMO SSU	-		0	29
PRIMOSSU	-		0	0
SAWDUST	-		0	75
SHRINKWRAP	-		0	20
SILICATE	-		0	25
SOAP STICK	-		0	0
SUNBURST BEADS	-		0	0
SUNBURST DP	-		0	50
SUPER SWEEP	-		0	0



Daily Mud Breakdown - Daily Cost
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

DAILY COST			
TKPP	-	0	5
ULTRA SEAL	-	0	6
UNIBRITE	-	0	0
UNIPAC HVD	-	0	18
UNIPAC HVD HIGH VIS	-	0	0
UNIPAC LVD	-	0	27
UNIPAC LVD LOW VIS	-	0	0
UNISEAL	-	0	29
UNISEAL G	-	0	29
UNISTAR	-	0	32
WALNUTS	-	0	69
WAX ON	-	0	0
WYOMING GEL	-	0	0
ZAN HD	-	0	0
DAILY TOTAL	\$0.00	\$0.00	
RUNNING TOTAL	\$122,538.96		\$122,538.96



Daily Mud Breakdown - Daily Use
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

WELL DATA					
NAME	LICENSE #	LOCATION	EVENT	AFE NUMBER	AFE AMOUNT
BLACKSPUR HZ LEDUC-WB 16-11-51-2	0502001	LEDUC-WB AB, Canada	Initial Drill	21DR0012	\$1,657,265.00

DAILY USE									
MUD PRODUCT	01-17	01-18	01-19	01-20	01-21	01-22	01-23	WEEK TOTAL	RUN. TOTAL
ALL-LOCK	-	-	-	-	-	-	-	0	0
BARITE	-	-	-	-	-	-	42	42	42
BENTONITE	-	-	40	-	-	-	-	40	40
BKE	-	-	-	-	-	-	-	0	0
BLEACH	-	-	-	-	-	-	-	0	0
BLOK	-	-	-	-	-	-	-	0	0
C 107 FLOC POLYMER	-	-	-	-	-	-	-	0	0
C-107	-	-	-	-	5	-	-	5	5
CALCIUM CARBONATE 0	-	-	-	-	-	-	-	0	0
CALCIUM CARBONATE 325	-	-	-	-	-	-	-	0	0
CALCIUM CARBONATE PG	-	-	-	-	-	-	-	0	0
CALCIUM CARBONATE SUPER CAL	-	-	-	-	-	-	-	0	0
CALCIUM CHLORIDE	-	-	-	-	-	-	-	0	0
CELLOPHANE	-	-	-	-	-	-	-	0	0
CONTONE	-	-	-	-	-	36	-	36	36
DI-SPERSE	-	-	-	-	-	-	-	0	0
ELIXIR	-	-	-	-	-	-	-	0	0
ENGINEERING	-	-	-	1	1	1	1	4	4
ENVIROBAGS	-	-	-	-	-	-	-	0	0
EXIXIR	-	-	-	-	-	-	-	0	0
GRAPHITE	-	-	-	-	-	-	-	0	0
GYPSUM	-	-	-	-	-	-	-	0	0
HUMALITE	-	-	-	-	-	-	-	0	0
HYPERDRILL AF 204RD	-	-	-	-	-	-	-	0	0
HYPERDRILL 247	-	-	-	-	2	1	-	3	3
HYPERDRILL AF 247RD	-	-	-	-	-	-	-	0	0
LIGNITE	-	-	-	-	-	-	-	0	0
LUBRAGLIDE BEADS C	-	-	-	-	-	-	-	0	0
MUD CHECK	-	-	-	-	-	-	-	0	0
NANOBLOK	-	-	-	-	-	29	-	29	29
NANOBLOK G	-	-	-	-	-	9	-	9	9
NUT SHELL M	-	-	-	-	-	-	-	0	0
PALLETS	-	-	-	-	-	-	-	0	0
PH DROP	-	-	-	-	-	-	-	0	0
POLYZAN	-	-	-	-	4	7	-	11	11
POTASSIUM CARBONATE	-	-	-	7	-	-	-	7	7
POTASSIUM SILICATE	-	-	-	-	-	-	-	0	0
PRIMA-SEAL MEDIUM	-	-	-	-	-	6	-	6	6
PRIMO SSU	-	-	-	-	-	29	-	29	29
PRIMOSSU	-	-	-	-	-	-	-	0	0
SAWDUST	-	-	75	-	-	-	-	75	75
SHRINKWRAP	-	-	-	-	-	-	-	0	0
SILICATE	-	-	-	5	8	12	-	25	25
SOAP STICK	-	-	-	-	-	-	-	0	0
SUNBURST BEADS	-	-	-	-	-	-	-	0	0
SUNBURST DP	-	-	-	-	-	-	-	0	0
SUPER SWEEP	-	-	-	-	-	-	-	0	0



Daily Mud Breakdown - Daily Use
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

DAILY USE									
TKPP	-	-	5	-	-	-	-	5	5
ULTRA SEAL	-	-	-	-	-	6	-	6	6
UNIBRITE	-	-	-	-	-	-	-	0	0
UNIPAC HVD	-	-	-	-	6	4	-	10	10
UNIPAC HVD HIGH VIS	-	-	-	-	-	-	-	0	0
UNIPAC LVD	-	-	-	-	2	-	-	2	2
UNIPAC LVD LOW VIS	-	-	-	-	-	-	-	0	0
UNISEAL	-	-	-	-	-	29	-	29	29
UNISEAL G	-	-	-	-	-	29	-	29	29
UNISTAR	-	-	-	-	4	-	-	4	4
WALNUTS	-	-	-	-	-	-	-	0	0
WAX ON	-	-	-	-	-	-	-	0	0
WYOMING GEL	-	-	-	-	-	-	-	0	0
ZAN HD	-	-	-	-	-	-	-	0	0
DAILY TOTAL	0	0	120	13	44	198	43	418	
RUNNING TOTAL	0	0	120	133	177	375	418		418



Daily Mud Breakdown - Daily Use
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

WELL DATA					
NAME	LICENSE #	LOCATION	EVENT	AFE NUMBER	AFE AMOUNT
BLACKSPUR HZ LEDUC-WB 16-11-51-2	0502001	LEDUC-WB AB, Canada	Initial Drill	21DR0012	\$1,657,265.00

DAILY USE									
MUD PRODUCT	01-24	01-25	01-26	01-27	01-28	01-29	01-30	WEEK TOTAL	RUN. TOTAL
ALL-LOCK	-	-	-	-	-	-	-	0	0
BARITE	20	-	-	50	50	-	-	120	162
BENTONITE	-	-	-	-	-	-	-	0	40
BKE	-	-	-	-	-	-	-	0	0
BLEACH	-	-	-	-	-	-	-	0	0
BLOK	-	-	-	-	-	-	-	0	0
C 107 FLOC POLYMER	-	-	-	-	-	-	-	0	0
C-107	-	-	-	-	-	-	-	0	5
CALCIUM CARBONATE 0	-	-	-	-	-	-	-	0	0
CALCIUM CARBONATE 325	-	-	-	-	-	-	-	0	0
CALCIUM CARBONATE PG	-	-	-	-	-	-	-	0	0
CALCIUM CARBONATE SUPER CAL	-	-	-	-	-	-	-	0	0
CALCIUM CHLORIDE	-	-	-	-	-	-	-	0	0
CELLOPHANE	-	-	-	-	-	-	-	0	0
CONTONE	-	-	-	-	-	-	-	0	36
DI-SPERSE	-	-	-	-	-	-	-	0	0
ELIXIR	-	-	-	-	12	-	-	12	12
ENGINEERING	1	1	1	1	1	-	-	5	9
ENVIROBAGS	-	-	-	-	-	-	-	0	0
EXIXIR	-	-	-	-	-	-	-	0	0
GRAPHITE	-	28	55	45	49	-	-	177	177
GYPSUM	-	-	-	-	-	-	-	0	0
HUMALITE	-	-	20	22	-	-	-	42	42
HYPERDRILL AF 204RD	-	-	-	-	-	-	-	0	0
HYPERDRILL 247	-	-	-	-	-	-	-	0	3
HYPERDRILL AF 247RD	-	-	-	-	-	-	-	0	0
LIGNITE	-	-	-	-	-	-	-	0	0
LUBRAGLIDE BEADS C	-	-	-	-	-	-	-	0	0
MUD CHECK	-	-	-	-	-	-	-	0	0
NANOBLOK	-	-	-	-	-	-	-	0	29
NANOBLOK G	-	-	-	-	-	-	-	0	9
NUT SHELL M	-	-	-	-	-	-	-	0	0
PALLETS	-	-	-	-	-	-	-	0	0
PH DROP	16	-	-	-	-	-	-	16	16
POLYZAN	-	-	-	2	-	-	-	2	13
POTASSIUM CARBONATE	-	-	-	-	-	-	-	0	7
POTASSIUM SILICATE	-	-	-	-	-	-	-	0	0
PRIMA-SEAL MEDIUM	-	-	-	-	-	-	-	0	6
PRIMO SSU	-	-	-	-	-	-	-	0	29
PRIMOSSU	-	-	-	-	-	-	-	0	0
SAWDUST	-	-	-	-	-	-	-	0	75
SHRINKWRAP	-	-	-	-	20	-	-	20	20
SILICATE	-	-	-	-	-	-	-	0	25
SOAP STICK	-	-	-	-	-	-	-	0	0
SUNBURST BEADS	-	-	-	-	-	-	-	0	0
SUNBURST DP	-	-	-	-	50	-	-	50	50
SUPER SWEEP	-	-	-	-	-	-	-	0	0



Daily Mud Breakdown - Daily Use
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

DAILY USE									
TKPP	-	-	-	-	-	-	-	0	5
ULTRA SEAL	-	-	-	-	-	-	-	0	6
UNIBRITE	-	-	-	-	-	-	-	0	0
UNIPAC HVD	4	2	2	-	-	-	-	8	18
UNIPAC HVD HIGH VIS	-	-	-	-	-	-	-	0	0
UNIPAC LVD	-	3	7	15	-	-	-	25	27
UNIPAC LVD LOW VIS	-	-	-	-	-	-	-	0	0
UNISEAL	-	-	-	-	-	-	-	0	29
UNISEAL G	-	-	-	-	-	-	-	0	29
UNISTAR	4	6	7	11	-	-	-	28	32
WALNUTS	-	8	33	22	6	-	-	69	69
WAX ON	-	-	-	-	-	-	-	0	0
WYOMING GEL	-	-	-	-	-	-	-	0	0
ZAN HD	-	-	-	-	-	-	-	0	0
DAILY TOTAL	45	48	125	168	188	0	0	574	
RUNNING TOTAL	463	511	636	804	992	992	992		992



Daily Mud Breakdown - Daily Use
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

WELL DATA					
NAME	LICENSE #	LOCATION	EVENT	AFE NUMBER	AFE AMOUNT
BLACKSPUR HZ LEDUC-WB 16-11-51-2	0502001	LEDUC-WB AB, Canada	Initial Drill	21DR0012	\$1,657,265.00

DAILY USE				
MUD PRODUCT	01-31		WEEK TOTAL	RUN. TOTAL
ALL-LOCK	-		0	0
BARITE	-		0	162
BENTONITE	-		0	40
BKE	-		0	0
BLEACH	-		0	0
BLOK	-		0	0
C 107 FLOC POLYMER	-		0	0
C-107	-		0	5
CALCIUM CARBONATE 0	-		0	0
CALCIUM CARBONATE 325	-		0	0
CALCIUM CARBONATE PG	-		0	0
CALCIUM CARBONATE SUPER CAL	-		0	0
CALCIUM CHLORIDE	-		0	0
CELLOPHANE	-		0	0
CONTONE	-		0	36
DI-SPERSE	-		0	0
ELIXIR	-		0	12
ENGINEERING	-		0	9
ENVIROBAGS	-		0	0
EXIXIR	-		0	0
GRAPHITE	-		0	177
GYP SUM	-		0	0
HUMALITE	-		0	42
HYPERDRILL AF 204RD	-		0	0
HYPERDRILL 247	-		0	3
HYPERDRILL AF 247RD	-		0	0
LIGNITE	-		0	0
LUBRAGLIDE BEADS C	-		0	0
MUD CHECK	-		0	0
NANOBLOK	-		0	29
NANOBLOK G	-		0	9
NUT SHELL M	-		0	0
PALLETS	-		0	0
PH DROP	-		0	16
POLYZAN	-		0	13
POTASSIUM CARBONATE	-		0	7
POTASSIUM SILICATE	-		0	0
PRIMA-SEAL MEDIUM	-		0	6
PRIMO SSU	-		0	29
PRIMOSSU	-		0	0
SAWDUST	-		0	75
SHRINKWRAP	-		0	20
SILICATE	-		0	25
SOAP STICK	-		0	0
SUNBURST BEADS	-		0	0
SUNBURST DP	-		0	50
SUPER SWEEP	-		0	0



Daily Mud Breakdown - Daily Use
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

DAILY USE			
TKPP	-	0	5
ULTRA SEAL	-	0	6
UNIBRITE	-	0	0
UNIPAC HVD	-	0	18
UNIPAC HVD HIGH VIS	-	0	0
UNIPAC LVD	-	0	27
UNIPAC LVD LOW VIS	-	0	0
UNISEAL	-	0	29
UNISEAL G	-	0	29
UNISTAR	-	0	32
WALNUTS	-	0	69
WAX ON	-	0	0
WYOMING GEL	-	0	0
ZAN HD	-	0	0
DAILY TOTAL	0	0	
RUNNING TOTAL	992		992



Section 4

Equipment Rentals & Fuel



Drilling Rental Inventory
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

WELL DATA					
NAME	LICENSE #	LOCATION	EVENT	AFE NUMBER	AFE AMOUNT
BLACKSPUR HZ LEDUC-WB 16-11-51-2	0502001	LEDUC-WB AB, Canada	Initial Drill	21DR0012	\$1,657,265.00
RENTAL ITEM	VENDOR	DAILY COST	USAGE	TOTAL COST	
2x Floc tanks, 3x Mix Bins	Black Diamond	\$242.00	13	\$3,146.00	
3x2 Silicate transfer pump	Black Diamond	\$100.00	5	\$500.00	
4 Man Sleeper	Precision Rentals	\$190.00	13	\$2,470.00	
4.5 HWDP DS40	Horizon Drilling	\$960.00	12	\$11,520.00	
6.25" Drilling jars	Rockbusters Oilfield Performance Ltd	\$300.00	4	\$1,200.00	
40' Matting x 10	Black Diamond	\$172.50	13	\$2,242.50	
Agitator #1 140	Impulse Down Hole Tools	\$1,350.00	5	\$6,750.00	
Agitator #1 140 engaged	Impulse Down Hole Tools	\$1,350.00	4	\$5,400.00	
Centrifuge Package	Precision Rentals	\$495.00	12	\$5,940.00	
Command Center	Precision Rentals	\$125.00	13	\$1,625.00	
Communication Package	Tango Delta	\$202.00	13	\$2,626.00	
Drilling recorder	Pason	\$1,800.00	13	\$23,400.00	
Flare tank	Horizon Drilling	\$75.00	12	\$900.00	
Garbage Bin	GFL	\$45.00	14	\$630.00	
Insulated 400bbl Tank x2	Black Diamond	\$50.00	13	\$650.00	
Light Tower	Moose Doktor	\$70.00	13	\$910.00	
Loader	Horizon Drilling	\$500.00	15	\$7,500.00	
Polymer Tank (Bulldog Energy)	Bulldog	\$130.00	5	\$650.00	
Septic System, lift stations/Gen set for Shacks	WTS	\$600.00	14	\$8,400.00	
Smart Slide	Horizon Drilling	\$650.00	11	\$7,150.00	
Stadium Light Tower & Cell Booster	Tango Delta	\$365.00	13	\$4,745.00	
Typhoon Reamer	Arrival	\$395.00	5	\$1,975.00	
Wellsite Shack 50/50 x3	Precision Rentals	\$375.00	13	\$4,875.00	



Daily Rentals Breakdown
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

WELL DATA											
NAME	LICENSE #	LOCATION	EVENT		AFE NUMBER		AFE AMOUNT				
BLACKSPUR HZ LEDUC-WB 16-11-51-2	0502001	LEDUC-WB AB, Canada	Initial Drill		21DR0012		\$1,657,265.00				
ITEM	VENDOR	COST	01-17	01-18	01-19	01-20	01-21	01-22	01-23	TOTAL	RUNNING
2x Floc tanks, 3x Mix Bins	Black Diamond	\$242.00		•	•	•	•	•	•	\$1,452.00	\$1,452.00
3x2 Silicate transfer pump	Black Diamond	\$100.00			•	•	•	•	•	\$500.00	\$500.00
4 Man Sleeper	Precision Rentals	\$190.00		•	•	•	•	•	•	\$1,140.00	\$1,140.00
4.5 HWDP DS40	Horizon Drilling	\$960.00			•	•	•	•	•	\$4,800.00	\$4,800.00
6.25" Drilling jars	Rockbusters Oilfield Performance Ltd	\$300.00			•	•	•	•	•	\$1,200.00	\$1,200.00
40' Matting x 10	Black Diamond	\$172.50		•	•	•	•	•	•	\$1,035.00	\$1,035.00
Agitator #1 140	Impulse Down Hole Tools	\$1,350.00								\$0.00	
Agitator #1 140 engaged	Impulse Down Hole Tools	\$1,350.00								\$0.00	
Centrifuge Package	Precision Rentals	\$495.00			•	•	•	•	•	\$2,475.00	\$2,475.00
Command Center	Precision Rentals	\$125.00		•	•	•	•	•	•	\$750.00	\$750.00
Communication Package	Tango Delta	\$202.00		•	•	•	•	•	•	\$1,212.00	\$1,212.00
Drilling recorder	Pason	\$1,800.00		•	•	•	•	•	•	\$10,800.00	\$10,800.00
Flare tank	Horizon Drilling	\$75.00			•	•	•	•	•	\$375.00	\$375.00
Garbage Bin	GFL	\$45.00		•	•	•	•	•	•	\$270.00	\$270.00
Insulated 400bbl Tank x2	Black Diamond	\$50.00		•	•	•	•	•	•	\$300.00	\$300.00
Light Tower	Moose Doktor	\$70.00		•	•	•	•	•	•	\$420.00	\$420.00
Loader	Horizon Drilling	\$500.00	•	•	•	•	•	•	•	\$3,500.00	\$3,500.00
Polymer Tank (Bulldog Energy)	Bulldog	\$130.00			•	•	•	•	•	\$650.00	\$650.00
Septic System, lift stations/Gen set for Shacks	WTS	\$600.00		•	•	•	•	•	•	\$3,600.00	\$3,600.00
Smart Slide	Horizon Drilling	\$650.00			•	•	•	•	•	\$2,600.00	\$2,600.00
Stadium Light Tower & Cell Booster	Tango Delta	\$365.00		•	•	•	•	•	•	\$2,190.00	\$2,190.00
Typhoon Reamer	Arrival	\$395.00								\$0.00	
Wellsite Shack 50/50 x3	Precision Rentals	\$375.00		•	•	•	•	•	•	\$2,250.00	\$2,250.00
DAILY TOTAL			\$500.00	\$4,736.50	\$6,496.50	\$7,446.50	\$7,446.50	\$7,446.50	\$7,446.50	\$41,519.00	
RUNNING TOTAL			\$500.00	\$5,236.50	\$11,733.00	\$19,179.50	\$26,626.00	\$34,072.50	\$41,519.00		\$41,519.00

Daily Rentals Breakdown

BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

WELL DATA											
NAME	LICENSE #	LOCATION	EVENT		AFE NUMBER		AFE AMOUNT				
BLACKSPUR HZ LEDUC-WB 16-11-51-2	0502001	LEDUC-WB AB, Canada	Initial Drill		21DR0012		\$1,657,265.00				
ITEM	VENDOR	COST	01-24	01-25	01-26	01-27	01-28	01-29	01-30	TOTAL	RUNNING
2x Floc tanks, 3x Mix Bins	Black Diamond	\$242.00	•	•	•	•	•	•	•	\$1,694.00	\$3,146.00
3x2 Silicate transfer pump	Black Diamond	\$100.00								\$0.00	\$500.00
4 Man Sleeper	Precision Rentals	\$190.00	•	•	•	•	•	•	•	\$1,330.00	\$2,470.00
4.5 HWDP DS40	Horizon Drilling	\$960.00	•	•	•	•	•	•	•	\$6,720.00	\$11,520.00
6.25" Drilling jars	Rockbusters Oilfield Performance Ltd	\$300.00								\$0.00	\$1,200.00
40' Matting x 10	Black Diamond	\$172.50	•	•	•	•	•	•	•	\$1,207.50	\$2,242.50
Agitator #1 140	Impulse Down Hole Tools	\$1,350.00	•	•	•	•	•	•	•	\$6,750.00	\$6,750.00
Agitator #1 140 engaged	Impulse Down Hole Tools	\$1,350.00	•	•	•	•	•	•	•	\$5,400.00	\$5,400.00
Centrifuge Package	Precision Rentals	\$495.00	•	•	•	•	•	•	•	\$3,465.00	\$5,940.00
Command Center	Precision Rentals	\$125.00	•	•	•	•	•	•	•	\$875.00	\$1,625.00
Communication Package	Tango Delta	\$202.00	•	•	•	•	•	•	•	\$1,414.00	\$2,626.00
Drilling recorder	Pason	\$1,800.00	•	•	•	•	•	•	•	\$12,600.00	\$23,400.00
Flare tank	Horizon Drilling	\$75.00	•	•	•	•	•	•	•	\$525.00	\$900.00
Garbage Bin	GFL	\$45.00	•	•	•	•	•	•	•	\$315.00	\$585.00
Insulated 400bbl Tank x2	Black Diamond	\$50.00	•	•	•	•	•	•	•	\$350.00	\$650.00
Light Tower	Moose Doktor	\$70.00	•	•	•	•	•	•	•	\$490.00	\$910.00
Loader	Horizon Drilling	\$500.00	•	•	•	•	•	•	•	\$3,500.00	\$7,000.00
Polymer Tank (Bulldog Energy)	Bulldog	\$130.00								\$0.00	\$650.00
Septic System, lift stations/Gen set for Shacks	WTS	\$600.00	•	•	•	•	•	•	•	\$4,200.00	\$7,800.00
Smart Slide	Horizon Drilling	\$650.00	•	•	•	•	•	•	•	\$4,550.00	\$7,150.00
Stadium Light Tower & Cell Booster	Tango Delta	\$365.00	•	•	•	•	•	•	•	\$2,555.00	\$4,745.00
Typhoon Reamer	Arrival	\$395.00	•	•	•	•	•	•	•	\$1,975.00	\$1,975.00
Wellsite Shack 50/50 x3	Precision Rentals	\$375.00	•	•	•	•	•	•	•	\$2,625.00	\$4,875.00
DAILY TOTAL			\$8,661.50	\$10,011.50	\$10,011.50	\$10,011.50	\$10,011.50	\$6,916.50	\$6,916.50	\$62,540.50	
RUNNING TOTAL			\$50,180.50	\$60,192.00	\$70,203.50	\$80,215.00	\$90,226.50	\$97,143.00	\$104,059.50		\$104,059.50



Daily Rentals Breakdown
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

WELL DATA						
NAME	LICENSE #	LOCATION	EVENT	AFE NUMBER	AFE AMOUNT	
BLACKSPUR HZ LEDUC-WB 16-11-51-2	0502001	LEDUC-WB AB, Canada	Initial Drill	21DR0012	\$1,657,265.00	
ITEM	VENDOR	COST	01-31	TOTAL		RUNNING
2x Floc tanks, 3x Mix Bins	Black Diamond	\$242.00		\$0.00		\$3,146.00
3x2 Silicate transfer pump	Black Diamond	\$100.00		\$0.00		\$500.00
4 Man Sleeper	Precision Rentals	\$190.00		\$0.00		\$2,470.00
4.5 HWDP DS40	Horizon Drilling	\$960.00		\$0.00		\$11,520.00
6.25" Drilling jars	Rockbusters Oilfield Performance Ltd	\$300.00		\$0.00		\$1,200.00
40' Matting x 10	Black Diamond	\$172.50		\$0.00		\$2,242.50
Agitator #1 140	Impulse Down Hole Tools	\$1,350.00		\$0.00		\$6,750.00
Agitator #1 140 engaged	Impulse Down Hole Tools	\$1,350.00		\$0.00		\$5,400.00
Centrifuge Package	Precision Rentals	\$495.00		\$0.00		\$5,940.00
Command Center	Precision Rentals	\$125.00		\$0.00		\$1,625.00
Communication Package	Tango Delta	\$202.00		\$0.00		\$2,626.00
Drilling recorder	Pason	\$1,800.00		\$0.00		\$23,400.00
Flare tank	Horizon Drilling	\$75.00		\$0.00		\$900.00
Garbage Bin	GFL	\$45.00	•	\$45.00		\$630.00
Insulated 400bbl Tank x2	Black Diamond	\$50.00		\$0.00		\$650.00
Light Tower	Moose Doktor	\$70.00		\$0.00		\$910.00
Loader	Horizon Drilling	\$500.00	•	\$500.00		\$7,500.00
Polymer Tank (Bulldog Energy)	Bulldog	\$130.00		\$0.00		\$650.00
Septic System, lift stations/Gen set for Shacks	WTS	\$600.00	•	\$600.00		\$8,400.00
Smart Slide	Horizon Drilling	\$650.00		\$0.00		\$7,150.00
Stadium Light Tower & Cell Booster	Tango Delta	\$365.00		\$0.00		\$4,745.00
Typhoon Reamer	Arrival	\$395.00		\$0.00		\$1,975.00
Wellsite Shack 50/50 x3	Precision Rentals	\$375.00		\$0.00		\$4,875.00
DAILY TOTAL			\$1,145.00	\$1,145.00		
RUNNING TOTAL			\$105,204.50			\$105,204.50



Drilling Fuel Inventory

WELL DATA				
NAME	LICENSE #	COST CENTRE	UWI	LOCATION
BLACKSPUR HZ LEDUC-WB 16-11-51-2	0502001	TBD	100/16-11-051-02W5/00	LEDUC-WB AB, Canada
NAME	START DATE	END DATE	AFE #	AFE AMOUNT
Drilling	2022-01-17	2022-01-30	21DR0012	\$1,657,265.00

FUEL INVENTORY					
FUEL		DELIVERIES	DELIVERED	USED	REMAINING
Marked Diesel		5	60,875.4 L	57,175.0 L	3,700.4 L
DATE	COMPANY	NOTE			QUANTITY
2022-01-18	Petro Canada				17,824.5 L
2022-01-21	Petro Canada				17,743.8 L
2022-01-23	Petro Canada				15,601.4 L
2022-01-27	Petro Canada				17,105.7 L
2022-01-31	Petro Canada	Suck out rig tank & boiler (estimate of 7400L)			-7,400.0 L



Section 5

Bit Records



Bit Record
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • #0502001

WELL DATA																					
NAME				LICENSE #		LOCATION				EVENT		AFE NUMBER				AFE AMOUNT					
BLACKSPUR HZ LEDUC-WB 16-11-51-2				0502001		100/16-11-051-02W5/00				Initial Drill		21DR0012				\$1,657,265.00					
BIT RECORD																					
#	Size (mm)	MANUFACTURER	TYPE	NOZZLES	SERIAL	IN (m)	OUT (m)	HOURS (hr)	LENGTH (m)	ROP (m/hr)	I	O	D	L	B	G	OT	RP			
D 1	311.00	DRILFORMANCE	DF519XM	7(11.10)	94481	20	271	2.75	251	91.27	1	1	NO	A	X	0	NO	TD			
D 2	222.00	halliburton	GTD54RM	8(10.30)	13636522	271	1,615	21.5	1,344	62.51	1	1	WT	A	X	0.00	NO	TD			
D 3	159.00	REED	TKC63-B1	5(11.10) 1(11.00)	A253526	1,615	4,088	33.25	2,473	74.38	1	2	CT	S	X	0	NO	TD			
TOTAL								57.50	4,068	70.75											

Date: Jan. 19, 2022

Rig: Horizon # 43



1

Well Name: BLACKSPUR HZ LEDUC-WB 16-11-51-2W5

Bit #	Make	Type	Serial #	Jets	Depth In (m)	Depth Out (m)	Meterage (m)	Bit Hours (hrs)
1	Drilformance	DF519XM	94481	7X11.1	20	271	271	2.75
Size (mm)	ROP (m/hr)	Flow Rate (m ³ /min)	Motor Disp. (Rev/L)	Bit RPM	Top Drive RPM	WOB (kdaN)	Total RPM	Diff Press (kPa)
311	91.3	2.6	0.042	110	45	8	155	2600
Inner Rows	Outer Rows	Dull Char	Location	Bearings	Gauge (mm)	Other Char	Reason Pulled	
1	1	NO	A	X	0	NO	TD	

Notes:

Top View



Side / 45° Angle



Damage View



Date: Jan. 20, 2022

Rig: Horizon # 43



5

Well Name: BLACKSPUR HZ LEDUC-WB 16-11-51-2W5

Bit #	Make	Type	Serial #	Jets	Depth In (m)	Depth Out (m)	Meterage (m)	Bit Hours (hrs)
2	Haliburton	GTD54RM	13636522	8x10.30	271	1615	1344	21.25
Size (mm)	ROP (m/hr)	Flow Rate (m ³ /min)	Motor Disp. (Rev/L)	Bit RPM	Top Drive RPM	WOB (kdaN)	Total RPM	Diff Press (kPa)
222	62.5	2.0	0.076	152	45	11	197	2500-4500
Inner Rows	Outer Rows	Dull Char	Location	Bearings	Gauge (mm)	Other Char	Reason Pulled	
1	1	WT	A	X	0	NO	TD	

Notes:

Top View



Side / 45° Angle



Damage View



Date: Jan. 24, 2022

Rig: Horizon # 43



9

Well Name

Bit #	Make	Type	Serial #	Jets	Depth In (m)	Depth Out (m)	Meterage (m)	Bit Hours (hrs)
3	Reed	TKC63-B1	A253526	6X11.1	1615	4088	2473	33.25
Size (mm)	ROP (m/hr)	Flow Rate (m ³ /min)	Motor Disp. (Rev/L)	Bit RPM	Top Drive RPM	WOB (kdaN)	Total RPM	Diff Press (kPa)
159	74.4	1.2	0.025	30	45	9.5	75	5000
Inner Rows	Outer Rows	Dull Char	Location	Bearings	Gauge (mm)	Other Char	Reason Pulled	
1	2	CT	S	X	0	NO	TD	

Notes:

Top View



Side / 45° Angle



Damage View





Section 6

Rig Time Breakup

WELL DATA					
NAME		LICENSE #	COST CENTRE	UWI	LOCATION
BLACKSPUR HZ LEDUC-WB 16-11-51-2		0502001	TBD	100/16-11-051-02W5/00	LEDUC-WB AB, Canada
DRILLING DATA					
NAME		START DATE	END DATE	AFE #	AFE AMOUNT
Initial Drill		2022-01-17	2022-01-30	21DR0012	\$1,657,265.00
TIME LOG					
FROM	TO	DUR	NPT	CODE	DETAIL
Drilling Daily Report • 2022-01-17					
TOTAL0.00 hr					
Drilling Daily Report • 2022-01-18					
00:00	07:45	7.75 hr		23B - W/O Daylight	Wait on Daylight & rig loads to finnish off rig move
07:45	08:00	0.25 hr		21D - Pre-Job Safety	Pre-job safety with truckers
08:00	15:00	7.00 hr		1 - Rig Up	Rig up cords & air lines & fuel lines & hydraulic line & raise derrick
15:00	16:00	1.00 hr		1C - Spot Rig/Loads/Buildings	Spot rig/loads/buildings
16:00	17:00	1.00 hr		1C - Spot Rig/Loads/Buildings	Spot rig/loads/buildings & rental loads
17:00	18:30	1.50 hr		1 - Rig Up	Rig up hook up steam lines & water lines & cords to rest of rig
18:30	18:45	0.25 hr		21 - Safety Meeting	Safety meeting crew hand over
18:45	00:00	5.25 hr		1 - Rig Up	Rig up, run steam around rig, get water circulating around rig
TOTAL24.00 hr					
Drilling Daily Report • 2022-01-19					
00:00	05:00	5.00 hr		1B - Rig Up Top Drive	Rig up top drive
05:00	06:30	1.50 hr		25 - Other	Pick up and weld on conductor
06:30	06:45	0.25 hr		21 - Safety Meeting	crew hand oover
06:45	08:00	1.25 hr		1 - Rig Up	continue rig up,
08:00	12:45	4.75 hr		1 - Rig Up	Continue to rig up/ de-ice equipment, rig up bails and elevators, tongs, flare and degasser lines to manifold shack, set up pipe arms, load on bha/ strap, rig in mud tanks/ fill mud tanks
12:45	13:00	0.25 hr		21F - Safety Inspection	safety meeting held with directional, RM and company rep
13:00	14:30	1.50 hr		20D - Handle Directional Tools	make up directional tools
14:30	14:45	0.25 hr		21 - Safety Meeting	Safety meeting/crew hand over with RM and company rep
14:45	15:45	1.00 hr		1 - Rig Up	Rig up mud tanks, pre-mix gel chem,
15:45	16:00	0.25 hr		21 - Safety Meeting	Pre-spud Safety meeting held with RM and company rep
16:00	17:15	1.25 hr		2 - Drill	Spud 311mm surface hole From 20m to 113m
17:15	18:30	1.25 hr		20A - Directional Surveys	Directional surveys , connections , worked pipe
18:30	18:45	0.25 hr		21 - Safety Meeting	crew hand over
18:45	20:15	1.50 hr		2 - Drill	Drill 311mm surface hole from 113m- 271m
20:15	21:45	1.50 hr		20A - Directional Surveys	Directional surveys, connections, work pipe
21:45	22:45	1.00 hr		5D - Circulate And Condition	Circulate and Condition
22:45	00:00	1.25 hr		3B - Back Reaming	Backream up to tools
TOTAL24.00 hr					
Drilling Daily Report • 2022-01-20					
00:00	02:00	2.00 hr		3B - Back Reaming	Back ream to tools
02:00	02:15	0.25 hr		21 - Safety Meeting	Safety meeting with directional
02:15	03:15	1.00 hr		20 - Directional Work	lay out directional tools
03:15	04:00	0.75 hr		12A - Rig Up/Down To Run Casing	Rig up to run casing
04:00	04:15	0.25 hr		21 - Safety Meeting	Safety meeting with tonghand
04:15	06:00	1.75 hr		12B - Run Casing	Run 24 joints of 244.5mm 53.57kg/m J55 LT/C casing to 271mKB.
06:00	06:30	0.50 hr		5 - Condition Mud & Circulate	Condition mud & circulate
06:30	06:45	0.25 hr		21 - Safety Meeting	crew change & Trican safety meeting
06:45	07:15	0.50 hr		12 - Run Casing & Cementing	rig in cementers
07:15	08:00	0.75 hr		12C - Cementing	Pump 1m³ water. Stop & pressure tests lines to 19Mpa. Pump 2m³ dyed water,14.08m³ (15 tonne)TSC 1700-S bulk cement with 0.4%AFA-7,0.4%TLA, 2%CaCl2. Drop plug & displace with 10.44m³ fresh water. 4.5m³ good cement returns. Plug down @ 07:24am.
08:00	09:00	1.00 hr		12C - Cementing	Cementing,flush conductor, rig out cementers
09:00	10:15	1.25 hr		14C - Nipple Up/Down Diverter System	prepare to cut conductor
10:15	12:30	2.25 hr		25 - Other	cut conductor and casing, clean cut on casing weld on bowl
12:30	14:30	2.00 hr		14B - Nipple Down BOPs	Nipple down BOPs
14:30	14:45	0.25 hr		21 - Safety Meeting	Safety meeting with pressure tester
14:45	16:00	1.25 hr		15A - Pressure Test BOPs	Pressure test kill line ,, manual valve , manifold valves @ 14000kpa
16:00	18:30	2.50 hr		15A - Pressure Test BOPs	Pressure test BOPs annular , pipe rams , blind rams, hcr @ 14000kpa
18:30	18:45	0.25 hr		21 - Safety Meeting	crew hand over

18:45	19:00	0.25 hr	15B - Function Test BOPs	Function test BOPs start press. 19000kpa, annular 17 secs to close , 7800kpa loss press. / pipe rams 5 secs to close , 2100kpa loss press. / HCR 2 secs to open , 100kpa loss press. / remaining press. 9200kpa, time to recharge 1min, 59secs, function test motor kills ,pre-charge =6800kpa, N2 bottles #1=2400 2400psi, #2=2400psi,#3=2500psi,#4=2400psi
19:00	19:15	0.25 hr	21 - Safety Meeting	Safety meeting with directional
19:15	21:00	1.75 hr	20 - Directional Work	Make up directional tools
21:00	22:00	1.00 hr	6A - Trip In Hole	Trip in hole
22:00	22:30	0.50 hr	21A - Drills/BOP, Etc.	BOP drill with rig crew, companyman and rig manager
22:30	23:30	1.00 hr	2C - Drill Cement/Drill Out Cement/Drill Float&Shoe	Drill cement/drill out cement/drill float & shoe
23:30	00:00	0.50 hr	2 - Drill	Drill 222mm hole from 271m to 300m
TOTAL24.00 hr				
Drilling Daily Report • 2022-01-21				
00:00	03:00	3.00 hr	2 - Drill	Drill 222mm hole from 300m to 640m
03:00	06:30	3.50 hr	20A - Directional Surveys	Directional surveys, connections, work pipe
06:30	06:45	0.25 hr	21 - Safety Meeting	Crew change handover meeting
06:45	07:45	1.00 hr	2 - Drill	Drill 222mm hole from 640 to 700m
07:45	08:00	0.25 hr	7 - Rig Service	Rig Service/ function pipe rams 5 secs to close
08:00	08:15	0.25 hr	21A - Drills/BOP, Etc.	bop drill with crew members well secure in 90 secs , discuss crew positions, kick warning signs
08:15	11:45	3.50 hr	2 - Drill	Drill 222mm hole from 700m- 1006m
11:45	13:15	1.50 hr	20A - Directional Surveys	Directional surveys , connections , worked pipe
13:15	13:45	0.50 hr	2 - Drill	Drill 222mm build section from 1006m-1082m
13:45	15:45	2.00 hr	20A - Directional Surveys	Directional surveys ,connections , worked pipe
15:45	16:00	0.25 hr	7 - Rig Service	Rig Service function test annular 17 secs to close
16:00	17:30	1.50 hr	2 - Drill	Drill 222mm build section from 1082m- 1158m
17:30	18:30	1.00 hr	20A - Directional Surveys	Directional surveys , connections , worked pipe
18:30	18:45	0.25 hr	21 - Safety Meeting	crew hand over
18:45	21:45	3.00 hr	2 - Drill	Drill 222mm build section from 1158m - 1292m
21:45	23:45	2.00 hr	20A - Directional Surveys	Directional surveys, connections, work pipe
23:45	00:00	0.25 hr	7 - Rig Service	Rig Service/ function HCR 2 secs to open
TOTAL24.00 hr				
Drilling Daily Report • 2022-01-22				
00:00	04:00	4.00 hr	2 - Drill	Drill 222mm build section from 1292m to 1420m
04:00	06:30	2.50 hr	20A - Directional Surveys	Directional surveys , connections , worked pipe
06:30	06:45	0.25 hr	21 - Safety Meeting	crew hand over
06:45	07:45	1.00 hr	2 - Drill	Drill 222mm build section from 1420m to 1463m
07:45	08:00	0.25 hr	7 - Rig Service	Rig Service/ function pipe rams 5 secs to close
08:00	11:00	3.00 hr	20A - Directional Surveys	Directional surveys , connections , worked pipe
11:00	14:30	3.50 hr	2 - Drill	Drill 222mm build section from 1463m- 1615, Pump tangent 1431mKB- 1463mKB
14:30	15:00	0.50 hr	5D - Circulate And Condition	Circulate hole clean
15:00	15:15	0.25 hr	7 - Rig Service	Rig Service function test HCR 2 secs to open
15:15	16:00	0.75 hr	6M - Wiper Trip	Wiper Trip , back ream build section to 1479m
16:00	18:30	2.50 hr	6M - Wiper Trip	Wiper Trip , back ream build section to 1000m
18:30	18:45	0.25 hr	21 - Safety Meeting	Crew hand over
18:45	19:15	0.50 hr	5D - Circulate And Condition	Circulate hole clean
19:15	21:30	2.25 hr	6M - Wiper Trip	Wiper Trip to shoe, flow check @ 266m, hole fill meas. 4.83m³, calc. 3.69m³, diff. + 1.14m³
21:30	23:45	2.25 hr	6A - Trip In Hole	Trip in hole, Clean Bridges @ 705m, 810m, 865m
23:45	00:00	0.25 hr	7 - Rig Service	Rig Service/ function HCR 3 secs to close
TOTAL24.00 hr				
Drilling Daily Report • 2022-01-23				
00:00	02:15	2.25 hr	6A - Trip In Hole	Trip in hole, ream @ 1026m, 1365m, and wash down from 1510m to 1615m
02:15	03:30	1.25 hr	5 - Condition Mud & Circulate	Circulate hole clean
03:30	06:30	3.00 hr	6B - Trip Out Of Hole	Trip out of hole, flow check @ 1366m, 796m
06:30	06:45	0.25 hr	21 - Safety Meeting	crew change handover meeting
06:45	08:00	1.25 hr	6B - Trip Out Of Hole	continue to trip out of hole
08:00	08:15	0.25 hr	6B - Trip Out Of Hole	Trip out of hole flow check @ 40m, 0m , trip record calc.=6.29m³, means=8.01m³, diff.= 1.72m³
08:15	08:30	0.25 hr	21 - Safety Meeting	Safety meeting with dir. hands
08:30	09:30	1.00 hr	20 - Directional Work	Directional work , lay down directional tools
09:30	10:15	0.75 hr	12A - Rig Up/Down To Run Casing	Rig up/clean floor to run casing
10:15	10:30	0.25 hr	21 - Safety Meeting	Safety meeting with power tong operator
10:30	16:00	5.50 hr	12B - Run Casing	Run casing to 996m
16:00	16:15	0.25 hr	5D - Circulate And Condition	Circulate bottoms up

16:15	18:30	2.25 hr	12B - Run Casing	Run casing to 1320m
18:30	18:45	0.25 hr	21 - Safety Meeting	crew hand over, safety meeting with tong hand
18:45	22:15	3.50 hr	12B - Run Casing	Run casing, wash in from 1320m to 1615m
22:15	00:00	1.75 hr	5 - Condition Mud & Circulate	Condition mud & circulate
TOTAL24.00 hr				

Drilling Daily Report • 2022-01-24

00:00	00:15	0.25 hr	21 - Safety Meeting	Safety meeting with cementers
00:15	02:30	2.25 hr	12C - Cementing	Rig in cementers and Cement with Trican. Pump 1m³ Optimum Flush, Pressure test to 36MPa, Pump 2m³ Optimum Flush at 1160kg/m³ containing 5Kg/m³ Optimum Flush + 36L/m³ MW-2W Mud Wash. Pump 3m³ (1.42t) Scavenger, Titanium 1400-S @ 1300Kg/m³ with 2% OGC-60 + 4% AFA-7. Pump 23.2m³ (14.57t) lead cement Titanium 1400-S @ 1400Kg/m³ with 2% OGC-60 + 4% AFA-7. Pump 17.04m³ tail cement at 1600 kg/m³ (16t) T.A.C.-S with 0.2% AFA-7 + 0.4% TWR-4 + 0.5% Gel + 0.2% TDH-2 + 0.2% CFR-12. Drop plug. Displace w/ 32.86m³ fresh water, Bump plug @ 5 MPa over circulating pressure and hold for 5 minutes. Bleed back & check floats, floats held with 200L back. 9m³ good cement returns to surface. Plug down @ 01:45. Pressure test the casing to 1.4MPa low & 14MPa high for 11min each
02:30	03:15	0.75 hr	14B - Nipple Down BOPs	Nipple down BOPs
03:15	03:30	0.25 hr	25 - Other	Set casing slips @ 40 dan
03:30	04:30	1.00 hr	14B - Nipple Down BOPs	cut casing and remove spools
04:30	05:30	1.00 hr	25 - Other	Install tubing head
05:30	05:45	0.25 hr	14E - Install Wellhead/Tree	install crossover spool
05:45	06:30	0.75 hr	14A - Nipple Up BOPs	Nipple up BOP
06:30	06:45	0.25 hr	21 - Safety Meeting	Crew change handover meeting
06:45	07:15	0.50 hr	14 - Nipple Up BOP	install flow t and flow line
07:15	08:00	0.75 hr	15 - Test BOP	pressure tested x/o flange 14000kpa high and low
08:00	08:15	0.25 hr	15B - Function Test BOPs	accumulated. Function test start press 20000kpa annular 17 secs to close , 7000loss, pipe rams 5 secs to close 1500kpa loss, HCR 2 secs to open 500kpa loss, 9000kpa remaining , 1min 27secs to recharge , function test motor kill
08:15	08:45	0.50 hr	25 - Other	Install wear bushing
08:45	09:00	0.25 hr	21 - Safety Meeting	Safety meeting with directional hands
09:00	10:45	1.75 hr	20 - Directional Work	Directional work , Pick up directional tools
10:45	12:45	2.00 hr	6A - Trip In Hole	Trip in hole to 950m
12:45	14:30	1.75 hr	6E - Pick Up Drill Pipe	Pick up drill pipe to 1501m
14:30	15:30	1.00 hr	9A - Slip/Cut Drilling Line	Slip/Cut drilling line 8.5m, @ 9112megj
15:30	15:45	0.25 hr	7 - Rig Service	Rig Service , change oil on tranny
15:45	16:00	0.25 hr	21A - Drills/BOP, Etc.	bop drill with crew members well secure in 90 sec , discuss crew positions, kick warning signs
16:00	16:45	0.75 hr	6E - Pick Up Drill Pipe	Pick up drill pipe to 1601m
16:45	17:15	0.50 hr	25 - Other	drill cement , float and shoe
17:15	17:30	0.25 hr	2 - Drill	Drill 159mm build section 1615 to 1624m
17:30	17:45	0.25 hr	5C - Displace To Water Base	Displace to polymer
17:45	18:30	0.75 hr	2 - Drill	Drill 159mm build section from 1624m- 1654m
18:30	18:45	0.25 hr	21 - Safety Meeting	crew hand over
18:45	19:00	0.25 hr	2 - Drill	Drill 159mm section from 1654m to 1663m
19:00	19:15	0.25 hr	21A - Drills/BOP, Etc.	BOP drill with night crew, rig manager and companyman
19:15	22:00	2.75 hr	2 - Drill	Drill 159mm lateral section from 1663m to 1865m
22:00	23:45	1.75 hr	20A - Directional Surveys	Directional surveys, connections, work pipe
23:45	00:00	0.25 hr	7 - Rig Service	Rig Service/ function HCR 2 secs to open
TOTAL24.00 hr				

Drilling Daily Report • 2022-01-25

00:00	03:30	3.50 hr	2 - Drill	Drill 159mm lateral section from 1865m to 2005m
03:30	06:30	3.00 hr	20A - Directional Surveys	Directional surveys, connections, work pipe
06:30	06:45	0.25 hr	21 - Safety Meeting	Crew change handover meeting
06:45	07:45	1.00 hr	2 - Drill	Drill 159mm lateral section from 2005m to 2030m
07:45	08:00	0.25 hr	7 - Rig Service	Rig Service/ function pipe rams 5 secs to close
08:00	12:45	4.75 hr	2 - Drill	Drill 159MM lateral section from 2030m- 2463m
12:45	15:45	3.00 hr	20A - Directional Surveys	Directional surveys , connections , worked pipe
15:45	16:00	0.25 hr	7 - Rig Service	Rig Service function test HCR 2 secs to open
16:00	17:30	1.50 hr	2 - Drill	Drill 159MM lateral section from 2463m- 2556m , drop ball for agitator at 2500m , 2000kpa increase
17:30	18:30	1.00 hr	20A - Directional Surveys	Directional surveys , connections , worked pipe
18:30	18:45	0.25 hr	21 - Safety Meeting	crew hand over
18:45	20:45	2.00 hr	2 - Drill	Drill 159mm lateral section from 2556m- 2770m
20:45	23:45	3.00 hr	20A - Directional Surveys	Directional surveys, connections, work pipe
23:45	00:00	0.25 hr	7 - Rig Service	Rig Service/ function annular 18 secs to close
TOTAL24.00 hr				

Drilling Daily Report • 2022-01-26

00:00	03:00	3.00 hr	2 - Drill	Drill 159mm lateral section from 2770m to 3030m
-------	-------	---------	-----------	---

03:00	06:30	3.50 hr	20A - Directional Surveys	Directional surveys, connections, work pipe
06:30	06:45	0.25 hr	21 - Safety Meeting	Crew change handover meeting
06:45	07:45	1.00 hr	2 - Drill	Drill 159mm lateral section from 3030m 3050m
07:45	08:00	0.25 hr	7 - Rig Service	Rig Service/ function pipe rams 5 secs to close
08:00	11:15	3.25 hr	2 - Drill	Drill 159MM lateral section from 3050M- 3384M
11:15	15:45	4.50 hr	20A - Directional Surveys	Directional surveys , connections , worked pipe
15:45	16:00	0.25 hr	7 - Rig Service	Rig Service function test HCR 2 secs to open
16:00	17:30	1.50 hr	2 - Drill	Drill 159mm lateral section from 3384m- 3498m
17:30	18:30	1.00 hr	20A - Directional Surveys	Directional surveys , connections , worked pipe
18:30	18:45	0.25 hr	21 - Safety Meeting	crew hand over
18:45	20:45	2.00 hr	2 - Drill	Drill 159mm lateral section from 3498m- 3651m
20:45	23:45	3.00 hr	20A - Directional Surveys	Directional surveys, connections, work pipe
23:45	00:00	0.25 hr	7 - Rig Service	Rig Service/ Function Annular 18 secs to close

TOTAL24.00 hr

Drilling Daily Report • 2022-01-27

00:00	03:00	3.00 hr	2 - Drill	Drill 159mm lateral section from 3651m to 3880m
03:00	06:30	3.50 hr	20A - Directional Surveys	Directional surveys, connections, work pipe
06:30	06:45	0.25 hr	21 - Safety Meeting	Crew change handover meeting
06:45	07:45	1.00 hr	2 - Drill	Drill 159mm lateral section from 3880m to 3920m
07:45	08:00	0.25 hr	7 - Rig Service	Rig Service/ function HCR 5 secs to close
08:00	10:30	2.50 hr	20A - Directional Surveys	Directional surveys , connections, worked pipe , down link mwd tool
10:30	12:15	1.75 hr	2 - Drill	Drill 159mm lateral section from 3920m-4088m
12:15	14:30	2.25 hr	5D - Circulate And Condition	Circulate and Condition
14:30	16:00	1.50 hr	6M - Wiper Trip	Trip out of hole , flow check @ 3905m,
16:00	18:30	2.50 hr	6M - Wiper Trip	Wiper Trip , flow check @ 2819m
18:30	18:45	0.25 hr	21 - Safety Meeting	crew hand over
18:45	20:15	1.50 hr	6M - Wiper Trip	Wiper Trip Tto shoe, flow check
20:15	23:45	3.50 hr	6A - Trip In Hole	Trip in hole, ream doglegs and the turn, trip in to 2550m
23:45	00:00	0.25 hr	7 - Rig Service	Rig Service/ function pipe rams 4 secs to close

TOTAL24.00 hr

Drilling Daily Report • 2022-01-28

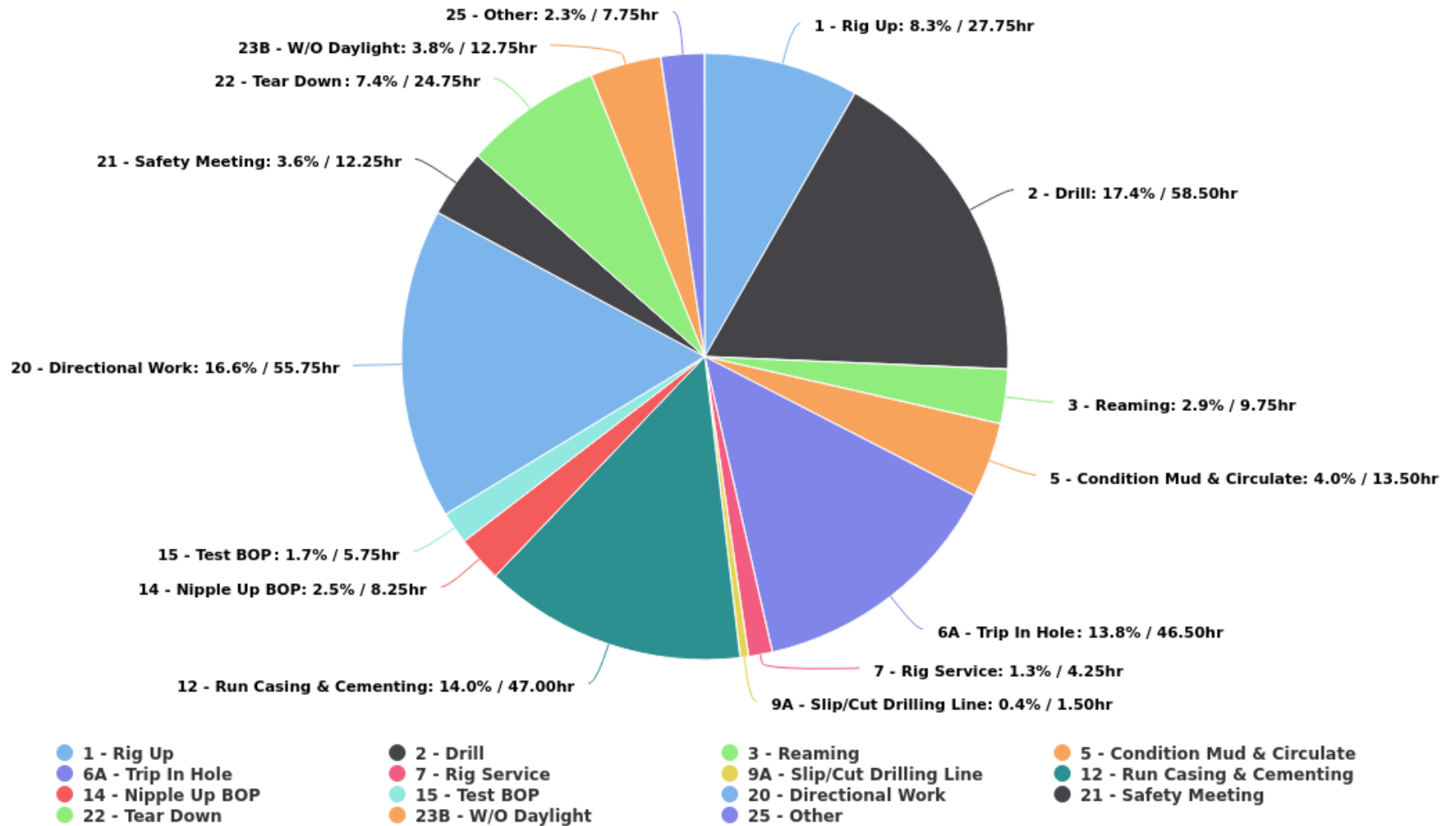
00:00	01:30	1.50 hr	6A - Trip In Hole	Trip in hole TO 2900m
01:30	06:30	5.00 hr	3 - Reaming	Reaming from 2900m to 3757m
06:30	06:45	0.25 hr	21 - Safety Meeting	crew change meeting
06:45	07:45	1.00 hr	3 - Reaming	continue to ream in hole
07:45	08:00	0.25 hr	7 - Rig Service	Rig Service/ function HCR 2 secs to close
08:00	08:30	0.50 hr	3 - Reaming	reaming from 4004-4088m
08:30	12:00	3.50 hr	5D - Circulate And Condition	Circulate and Condition mud , pumped high vis sweep , spotted lube pill
12:00	15:15	3.25 hr	6B - Trip Out Of Hole	Trip out of hole to run liner, 10 min flow checks @ 2525M racked 1600m of pipe in derrick
15:15	16:00	0.75 hr	6F - Lay Down Drill Pipe	Lay down drill pipe TO 2336m
16:00	18:30	2.50 hr	6F - Lay Down Drill Pipe	Lay down drill pipe TO 1424m , flow check @ 2036m
18:30	18:45	0.25 hr	21 - Safety Meeting	crew hand over , discuss weekly operations and improvement meeting talked about what we has a group can do too make sure we all go home @ end of day safe and sound
18:45	22:15	3.50 hr	6F - Lay Down Drill Pipe	Lay down drill pipe flow check @ (crew working short handed, floorhand decided not to come too work)
22:15	22:30	0.25 hr	21D - Pre-Job Safety	Pre-job safety prio to slip & cut
22:30	23:00	0.50 hr	9A - Slip/Cut Drilling Line	Slip/Cut drilling line 11.82M total MJ 12622
23:00	23:15	0.25 hr	6F - Lay Down Drill Pipe	Lay down drill pipe
23:15	23:30	0.25 hr	21D - Pre-Job Safety	Pre-job safety prio to laying down directional tools
23:30	00:00	0.50 hr	20D - Handle Directional Tools	Handle directional tools lay out

TOTAL24.00 hr

Drilling Daily Report • 2022-01-29

00:00	00:15	0.25 hr	20 - Directional Work	Break bit and lay down motor, hole fill calc. 14.87m³, meas. 15.29m³, diff. + 0.42m³.
00:15	01:00	0.75 hr	12A - Rig Up/Down To Run Casing	Rig up to run liner (crew working short handed)
01:00	01:30	0.50 hr	21 - Safety Meeting	Safety meeting with tool hands and tonghand
01:30	06:30	5.00 hr	12B - Run Casing	Run liner (crew working short handed)
06:30	06:45	0.25 hr	21 - Safety Meeting	crew change handover
06:45	08:00	1.25 hr	12B - Run Casing	Run liner
08:00	10:00	2.00 hr	12B - Run Casing	Run casing
10:00	15:00	5.00 hr	12B - Run Casing	Run casing , run in drill pipe on top of liner
15:00	15:45	0.75 hr	12B - Run Casing	press. up to 9900kpa to burst aerostat , bleed and pump 18.5m3 to fill liner

15:45	16:00	0.25 hr	5D - Circulate And Condition	Circulate bottoms up
16:00	17:15	1.25 hr	5D - Circulate And Condition	continue circulate bottoms up
17:15	17:30	0.25 hr	21 - Safety Meeting	safety meeting with trican, packer plus
17:30	18:30	1.00 hr	25 - Other	drop ball and pump 2.0m³, let ball gravity drop for 15mins, pump 200l/min to land ball , press. up to 16.0mpa,bleed down to 5.0mpa, slack off test to 30000dan compression, bleed off, rotate drill string 4 times , press. up to 28.7mpa to shear setting ball
18:30	18:45	0.25 hr	21 - Safety Meeting	Crew hand over
18:45	20:30	1.75 hr	12C - Cementing	Rig in cement head and Cement with Trican. Pump 1m³ Water, Pressure test to 45 MPa, Pump 2.5m³ Optimum Flush at 1160kg/m³ containing 5Kg/m³ Optimum Flush + 36L/m³ MW-2W Mud Wash. Pump 3m³ (1.88t) Scavenger T.A.C. Bulk Cement with 0.2% AFA-7 + 0.4% TWR-4 + 0.5% Gel + 0.2% TDH-2 + 0.2% CFR-12. Pump 40.6m³ cement at 1600 kg/m³ (38.12t) (60% XS) T.A.C.-S with 0.2% AFA-7 + 0.4% TWR-4 + 0.5% Gel + 0.2% TDH-2 + 0.2% CFR-12. Drop plug. Displace with 19.5m³ Retarder Water + 9.5m³ Clay/Inhib Water Bump plug @ 7 MPa over circulating pressure and hold for 5 minutes. Bleed back & check floats, floats held with 300L back. Pull out of Liner Hanger & circulate bottoms up. 9m³ good cement returns to surface. Plug down @ 20:20. Pressure test Hanger & Liner to 14MPa high for 11min each
20:30	20:45	0.25 hr	25 - Other	Release setting dogs on hanger, pull of TBR
20:45	21:00	0.25 hr	5C - Displace To Water Base	Circulate bottom up with 16m³ of clay/inhibitor water
21:00	21:15	0.25 hr	25 - Other	pressure test wellbore to 14000Kpa for 11mins
21:15	21:30	0.25 hr	12A - Rig Up/Down To Run Casing	Rig out cementers
21:30	00:00	2.50 hr	6F - Lay Down Drill Pipe	Lay down drill string
TOTAL24.00 hr				
Drilling Daily Report • 2022-01-30				
00:00	03:15	3.25 hr	6F - Lay Down Drill Pipe	Lay down drill string
03:15	03:30	0.25 hr	25 - Other	Pull wear bushing
03:30	04:00	0.50 hr	12A - Rig Up/Down To Run Casing	Rig up to run tie back string
04:00	04:15	0.25 hr	21 - Safety Meeting	Safety meeting with tonghand
04:15	06:30	2.25 hr	12 - Run Casing & Cementing	Run tie back string
06:30	06:45	0.25 hr	21 - Safety Meeting	crew change handover
06:45	08:00	1.25 hr	12B - Run Casing	Run tieback string
08:00	09:15	1.25 hr	12B - Run Casing	Running tie back
09:15	11:30	2.25 hr	12B - Run Casing	unlatch and space out
11:30	12:00	0.50 hr	15D - Test Wellhead/Tree	attempt to pressure test tubing hanger
12:00	15:45	3.75 hr	12B - Run Casing	unlatch to change out hanger seals , wait on new tubing hanger seals
15:45	16:00	0.25 hr	15A - Pressure Test BOPs	Pressure test hanger at 14mpa for 10 mins
16:00	17:30	1.50 hr	14B - Nipple Down BOPs	Nipple down BOPs
17:30	17:45	0.25 hr	14E - Install Wellhead/Tree	Install wellhead
17:45	18:30	0.75 hr	22B - Rig Down Top Drive	Rig down top drive
18:30	18:45	0.25 hr	21 - Safety Meeting	crew hand over
18:45	22:00	3.25 hr	22B - Rig Down Top Drive	Rig down top drive
22:00	00:00	2.00 hr	22 - Tear Down	Tear down. Rig released @ 23:59, Jan. 30/22
TOTAL24.00 hr				
Drilling Daily Report • 2022-01-31				
00:00	06:30	6.50 hr	22 - Tear Down	Tear down rig and prep for move
06:30	06:45	0.25 hr	21 - Safety Meeting	Safety meeting crew hand over
06:45	08:00	1.25 hr	22 - Tear Down	Tear down rig and prep for move
08:00	16:00	8.00 hr	22 - Tear Down	Tear down rig & prep for move
16:00	19:00	3.00 hr	22 - Tear Down	Tear down & prep for move
19:00	00:00	5.00 hr	23B - W/O Daylight	Wait on daylight
TOTAL24.00 hr				





Section 7

Cost Breakdowns, Cost Overview & Cost Summaries



Curve Estimate
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

WELL DATA					
NAME	LICENSE #	COST CENTRE	UWI	LOCATION	
BLACKSPUR HZ LEDUC-WB 16-11-51-2	0502001	TBD	100/16-11-051-02W5/00	LEDUC-WB AB, Canada	
DRILLING DATA					
NAME	START DATE	END DATE	AFE #	AFE \$	
Initial Drill	2022-01-17	2022-01-30	21DR0012	\$1,657,265.00	
CURVE ESTIMATE					
DESCRIPTION	DEPTH	HOURS	DAYS	COST	TOTAL
Move rig onto location and rig up	0 m	0 hr	0.00	\$236,612.00	\$236,612.00
Spud and drill 311mm surface hole	270 m	10 hr	0.40	\$33,749.00	\$270,361.00
Circulate clean, pull wiper and conditon mud. POOH. Run casing and cement.	270 m	14 hr	1.00	\$92,363.00	\$362,724.00
WOC. Cut casing, N/U BOPs, pressure test and P/U & RIH 222mm BHA	270 m	10 hr	1.40	\$33,749.00	\$396,473.00
Drill ahead 222mm hole	1,038 m	14 hr	2.00	\$50,623.00	\$447,096.00
Drill 222mm hole to ICP	1,558 m	19 hr	2.80	\$67,498.00	\$514,594.00
Circulate hole clean, pull wiper trip, POOH	1,558 m	4 hr	2.97	\$16,874.00	\$531,468.00
Run intermediate casing and cement. Cut casing, install casing spool, N/U BOPs and test. RIH 159mm BHA	1,558 m	24 hr	3.97	\$210,872.00	\$742,340.00
Drill 159mm hole	2,438 m	24 hr	4.97	\$84,372.00	\$826,712.00
Continue drill 159mm hole	3,318 m	24 hr	5.97	\$84,372.00	\$911,084.00
Drill to well TD	4,198 m	24 hr	6.97	\$84,372.00	\$995,456.00
Circulate hole clean, pull wiper trip, POOH. Run 114.3mm liner.	4,198 m	24 hr	7.97	\$296,337.00	\$1,291,793.00
Cement. POOH. Run tieback string. Install wellhead.	4,198 m	24 hr	8.97	\$365,472.00	\$1,657,265.00

Total Cost Overview Report

BLACKSPUR HZ LEDUC-WB 16-11-51-2 •• #0502001

WELL DATA					
NAME	LICENSE #	COST CENTRE	UWI	LOCATION	
BLACKSPUR HZ LEDUC-WB 16-11-51-2	0502001	TBD	100/16-11-051-02W5/00	LEDUC-WB AB, Canada	
DRILLING DATA					
NAME	START DATE	END DATE	AFE #	AFE \$	
Initial Drill	2022-01-17	2022-01-30	21DR0012	\$1,657,265.00	
COST TOTALS					
COST ITEM	ESTIMATE	FIELD	EST v FIELD	ACTUAL	FIELD v ACTUAL
9320-307 - BITS	\$25,000.00	\$31,500.00	-\$6,500.00	\$0.00	\$31,500.00
9320-309 - BOILER / STEAMER	\$0.00	\$22,650.00	-\$22,650.00	\$0.00	\$22,650.00
9320-313 - CASING - SURFACE	\$25,740.00	\$38,552.50	-\$12,812.50	\$0.00	\$38,552.50
9320-315 - CASING - INTERMEDIATE	\$102,000.00	\$157,500.00	-\$55,500.00	\$0.00	\$157,500.00
9320-316 - CASING ACCESSORIES - SURFACE	\$4,500.00	\$1,370.95	\$3,129.05	\$0.00	\$1,370.95
9320-317 - CASING SERVICES - SURFACE	\$2,500.00	\$9,503.67	-\$7,003.67	\$0.00	\$9,503.67
9320-318 - CASING ACCESS. - INTERMEDIATE	\$4,000.00	\$10,187.93	-\$6,187.93	\$0.00	\$10,187.93
9320-319 - CASING SERVICES - INTERMEDIATE	\$2,500.00	\$15,842.50	-\$13,342.50	\$0.00	\$15,842.50
9320-321 - CEMENTING - SURFACE	\$9,000.00	\$14,898.94	-\$5,898.94	\$0.00	\$14,898.94
9320-323 - CEMENTING - INTERMEDIATE	\$18,000.00	\$30,455.77	-\$12,455.77	\$0.00	\$30,455.77
9320-325 - CONDUCTOR & RAT HOLE	\$0.00	\$8,900.00	-\$8,900.00	\$0.00	\$8,900.00
9320-327 - WELLSITE SUPERVISION - CONSTRUCTION	\$16,000.00	\$10,292.00	\$5,708.00	\$0.00	\$10,292.00
9320-335 - PRESSURE TESTING	\$4,000.00	\$7,944.00	-\$3,944.00	\$0.00	\$7,944.00
9320-337 - DRILLING RIG DAYRATE	\$132,575.00	\$201,603.28	-\$69,028.28	\$0.00	\$201,603.28
9320-341 - DIRECTIONAL DRILLING	\$56,000.00	\$103,456.00	-\$47,456.00	\$0.00	\$103,456.00
9320-342 - DISPOSAL	\$25,000.00	\$87,667.82	-\$62,667.82	\$0.00	\$87,667.82
9320-345 - ENGINEERING DESIGN & SERVICES	\$10,000.00	\$10,000.00	\$0.00	\$0.00	\$10,000.00
9320-346 - ENVIRONMENTAL	\$15,000.00	\$24,391.23	-\$9,391.23	\$0.00	\$24,391.23
9320-347 - EQUIPMENT RENTALS	\$77,750.00	\$136,635.71	-\$58,885.71	\$0.00	\$136,635.71
9320-348 - EQUIPMENT HAULING	\$20,000.00	\$1,292.50	\$18,707.50	\$0.00	\$1,292.50
9320-349 - FREIGHT & HAULING	\$15,000.00	\$19,226.86	-\$4,226.86	\$0.00	\$19,226.86
9320-350 - FLUID TRANSFER & HAULING	\$15,000.00	\$14,590.75	\$409.25	\$0.00	\$14,590.75
9320-351 - FUEL	\$50,000.00	\$67,770.49	-\$17,770.49	\$0.00	\$67,770.49
9320-353 - INSURANCE	\$15,000.00	\$0.00	\$15,000.00	\$0.00	\$0.00
9320-355 - LEASE & ROAD CONSTRUCTION	\$61,350.00	\$61,716.00	-\$366.00	\$0.00	\$61,716.00
9320-363 - MISCELLANEOUS/CONTINGENCY	\$149,123.00	\$0.00	\$149,123.00	\$0.00	\$0.00
9320-365 - MUD/FLUIDS/CHEMICALS	\$70,000.00	\$124,129.00	-\$54,129.00	\$0.00	\$124,129.00
9320-369 - RIG MOVE IN/MOVE OUT	\$60,000.00	\$194,893.00	-\$134,893.00	\$0.00	\$194,893.00
9320-371 - RIG UP/RIG OUT	\$12,850.00	\$36,300.00	-\$23,450.00	\$0.00	\$36,300.00
9320-372 - SAFETY SERVICES	\$0.00	\$10,563.15	-\$10,563.15	\$0.00	\$10,563.15
9320-373 - SITE RESTORATION & CLEAN UP	\$37,100.00	\$0.00	\$37,100.00	\$0.00	\$0.00
9320-375 - SUBSISTANCE / CAMP	\$15,400.00	\$35,057.50	-\$19,657.50	\$0.00	\$35,057.50
9320-377 - SURFACE LEASE ACQUISITION	\$55,500.00	\$0.00	\$55,500.00	\$0.00	\$0.00
9320-379 - SURVEY	\$12,000.00	\$2,947.00	\$9,053.00	\$0.00	\$2,947.00
9320-383 - WATER HAULING, TRANSFER & PURCHASE	\$12,500.00	\$18,402.00	-\$5,902.00	\$0.00	\$18,402.00
9320-385 - WELLSITE SUPERVISION - ENGINEERING	\$31,000.00	\$46,500.00	-\$15,500.00	\$0.00	\$46,500.00
9320-387 - WELLSITE SUPERVISION - GEOLOGICAL	\$15,500.00	\$24,500.00	-\$9,000.00	\$0.00	\$24,500.00
9320-389 - VACUUM SERVICE	\$15,500.00	\$21,000.00	-\$5,500.00	\$0.00	\$21,000.00
9320-399 - ADMINISTRATION OVERHEAD (3,2,1)	\$16,912.00	\$0.00	\$16,912.00	\$0.00	\$0.00
9322-413 - CASING - PRODUCTION	\$196,965.00	\$201,914.52	-\$4,949.52	\$0.00	\$201,914.52
9322-415 - CASING ACCESSORIES - PRODUCTION	\$206,000.00	\$224,546.00	-\$18,546.00	\$0.00	\$224,546.00
9322-417 - CASING SERVICES - PRODUCTION	\$15,000.00	\$27,988.65	-\$12,988.65	\$0.00	\$27,988.65
9322-419 - CEMENTING - PRODUCTION	\$30,000.00	\$42,410.31	-\$12,410.31	\$0.00	\$42,410.31
TOTAL	\$1,657,265.00	\$2,099,100.03	-\$441,835.03	\$0.00	\$2,099,100.03



Initial Drill Daily Costs Breakdown - Week 1
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

WELL DATA									
NAME	LICENSE #	COST CENTRE	UWI	LOCATION					
BLACKSPUR HZ LEDUC-WB 16-11-51-2	0502001	TBD	100/16-11-051-02W5/00	LEDUC-WB AB, Canada					
DRILLING DATA									
NAME	START DATE	END DATE	AFE #	AFE \$					
Initial Drill	2022-01-17	2022-01-30	21DR0012	\$1,657,265.00					
DAILY BREAKDOWN									
CODE - COST ITEM	2021-11-18	2021-11-19	2021-11-20	2021-11-22	2021-11-23	2021-11-24	2021-11-25	TOTAL	RUN. TOTAL
9320-327 - WELLSITE SUPERVISION - CONSTRUCTION	\$1,415.00	\$1,235.00	\$1,172.00	\$1,325.00	\$1,190.00	\$1,215.00	\$0.00	\$7,552.00	\$7,552.00
DRADER LOCATING INC: Travel to location, Restake and sweep location	\$1,415.00							\$1,415.00	
DRADER LOCATING INC: Meet with land owner, deliver land owner package		\$1,235.00						\$1,235.00	
DRADER LOCATING INC: Meet with pipeline rep, ramp over pipeline on access			\$1,172.00					\$1,172.00	
DRADER LOCATING INC: Start to topsoil, Tour Blackspur field				\$1,325.00				\$1,325.00	
DRADER LOCATING INC: Finish stripping topsoil and subsoil					\$1,190.00			\$1,190.00	
DRADER LOCATING INC: Rip and strip topsoil on access, Travel to Brooks, Deliver landowner payment, Sweep location						\$1,215.00		\$1,215.00	
9320-355 - LEASE & ROAD CONSTRUCTION	\$576.00	\$0.00	\$4,445.00	\$4,350.00	\$4,350.00	\$4,350.00	\$4,355.00	\$22,426.00	\$22,426.00
Topnotch: Sweep location and access for buried facilities	\$576.00							\$576.00	
Shawns Oilfield Service: Haul and place mats over pipeline, Haul D8N and D6R to location			\$4,445.00					\$4,445.00	
Shawns Oilfield Service: Start to strip location				\$4,350.00				\$4,350.00	
Shawns Oilfield Service: Finish stripping topsoil and subsoil					\$4,350.00			\$4,350.00	
Shawns Oilfield Service: Rip and strip topsoil on access, start to build road						\$4,350.00		\$4,350.00	
Shawns Oilfield Service: Build access road, Haul hoe to location							\$4,355.00	\$4,355.00	
9320-379 - SURVEY	\$1,932.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,932.00	\$1,932.00
Caltech Surveys: Restake location	\$1,932.00							\$1,932.00	
DAILY CUMULATIVE	\$3,923.00	\$1,235.00	\$5,617.00	\$5,675.00	\$5,540.00	\$5,565.00	\$4,355.00	\$31,910.00	\$31,910.00
	\$3,923.00	\$5,158.00	\$10,775.00	\$16,450.00	\$21,990.00	\$27,555.00	\$31,910.00		\$31,910.00



Initial Drill Daily Costs Breakdown - Week 2
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

WELL DATA									
NAME	LICENSE #	COST CENTRE		UWI	LOCATION				
BLACKSPUR HZ LEDUC-WB 16-11-51-2	0502001	TBD		100/16-11-051-02W5/00	LEDUC-WB AB, Canada				
DRILLING DATA									
NAME	START DATE	END DATE		AFE #	AFE \$				
Initial Drill	2022-01-17	2022-01-30		21DR0012	\$1,657,265.00				
DAILY BREAKDOWN									
CODE - COST ITEM	2021-11-26	2021-11-27	2021-11-28	2021-11-29	2021-11-30	2022-01-08	2022-01-09	TOTAL	RUN. TOTAL
9320-325 - CONDUCTOR & RAT HOLE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$8,900.00	\$8,900.00	\$8,900.00
Energy Drilling Ltd: Set and cement conductor and mouse hole							\$8,900.00	\$8,900.00	
9320-327 - WELLSITE SUPERVISION - CONSTRUCTION	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,370.00	\$1,370.00	\$8,922.00
DRADER LOCATING INC: Travel to location, Blade snow to get on location, Drill and cement conductor and mouse hole							\$1,370.00	\$1,370.00	
9320-355 - LEASE & ROAD CONSTRUCTION	\$6,545.00	\$7,000.00	\$7,835.00	\$6,410.00	\$7,320.00	\$0.00	\$1,555.00	\$36,665.00	\$59,091.00
Shawns Oilfield Service: Build road	\$6,545.00							\$6,545.00	
Shawns Oilfield Service: Build road and lease		\$7,000.00						\$7,000.00	
Shawns Oilfield Service: Build road, level lease			\$7,835.00					\$7,835.00	
Shawns Oilfield Service: Deliver and install 3 10m culverts, Blade road and access				\$6,410.00				\$6,410.00	
Shawns Oilfield Service: Haul and spread gravel on road, Blade road					\$7,320.00			\$7,320.00	
Shawns Oilfield Service: Travel to location Blade access and around well center for rat hole rig							\$1,555.00	\$1,555.00	
9320-379 - SURVEY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,015.00	\$0.00	\$1,015.00	\$2,947.00
Caltech Surveys: Reset well centre 16-11						\$1,015.00		\$1,015.00	
DAILY	\$6,545.00	\$7,000.00	\$7,835.00	\$6,410.00	\$7,320.00	\$1,015.00	\$11,825.00	\$47,950.00	
CUMULATIVE	\$38,455.00	\$45,455.00	\$53,290.00	\$59,700.00	\$67,020.00	\$68,035.00	\$79,860.00		\$79,860.00



Initial Drill Daily Costs Breakdown - Week 3
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

WELL DATA									
NAME	LICENSE #	COST CENTRE	UWI	LOCATION					
BLACKSPUR HZ LEDUC-WB 16-11-51-2	0502001	TBD	100/16-11-051-02W5/00	LEDUC-WB AB, Canada					
DRILLING DATA									
NAME	START DATE	END DATE	AFE #	AFE \$					
Initial Drill	2022-01-17	2022-01-30	21DR0012	\$1,657,265.00					
DAILY BREAKDOWN									
CODE - COST ITEM	2022-01-10	2022-01-15	2022-01-17	2022-01-18	2022-01-19	2022-01-20	2022-01-21	TOTAL	RUN. TOTAL
9320-307 - BITS	\$0.00	\$0.00	\$0.00	\$5,500.00	\$0.00	\$13,500.00	\$0.00	\$19,000.00	\$19,000.00
Drillformance: 311mm Surface bit rental SN/94481				\$5,500.00				\$5,500.00	
Halliburton Drill Bits & Service: 222mm GTD54RM Bit Rental. SN/13636522						\$13,500.00		\$13,500.00	
9320-309 - BOILER / STEAMER	\$0.00	\$0.00	\$0.00	\$2,040.00	\$2,040.00	\$2,040.00	\$2,040.00	\$8,160.00	\$8,160.00
Horizon Drilling: Boiler Day Rate				\$2,040.00	\$2,040.00	\$2,040.00	\$2,040.00	\$8,160.00	
9320-313 - CASING - SURFACE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$38,552.50	\$0.00	\$38,552.50	\$38,552.50
Trimark Tubulars: Surface casing cost						\$38,552.50		\$38,552.50	
9320-316 - CASING ACCESSORIES - SURFACE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,370.95	\$0.00	\$1,370.95	\$1,370.95
Direct Casing Accessories: Surface casing float equipment						\$1,370.95		\$1,370.95	
9320-317 - CASING SERVICES - SURFACE	\$0.00	\$0.00	\$0.00	\$4,598.67	\$0.00	\$4,905.00	\$0.00	\$9,503.67	\$9,503.67
Great North Wellhead & Frac: Casing bowl & related equipment				\$3,240.55				\$3,240.55	
Winalta Transport: Haul surface csg to location				\$1,358.12				\$1,358.12	
Derek Casing: Power tongs for 244.5mm surface casing						\$2,375.00		\$2,375.00	
D.Leslie Welding: Welding for entire well						\$2,530.00		\$2,530.00	
9320-321 - CEMENTING - SURFACE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$14,898.94	\$0.00	\$14,898.94	\$14,898.94
Trican Well Services: Surface cement cost (15 tonne)						\$14,898.94		\$14,898.94	
9320-325 - CONDUCTOR & RAT HOLE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$8,900.00
9320-327 - WELLSITE SUPERVISION - CONSTRUCTION	\$1,370.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,370.00	\$10,292.00
DRADER LOCATING INC: Remove snow off lease and access, travel home	\$1,370.00							\$1,370.00	
9320-335 - PRESSURE TESTING	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3,633.00	\$0.00	\$3,633.00	\$3,633.00
Semerra: Pressure Test Well Control Equipment + 300L Glycol						\$3,633.00		\$3,633.00	
9320-337 - DRILLING RIG DAYRATE	\$0.00	\$0.00	\$7,250.00	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$67,250.00	\$67,250.00
N/A: Horizon Drilling day rate (12Hrs)			\$7,250.00					\$7,250.00	
Horizon Drilling: Horizon Drilling day rate				\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$60,000.00	
9320-341 - DIRECTIONAL DRILLING	\$0.00	\$0.00	\$0.00	\$4,580.00	\$13,510.00	\$17,180.00	\$6,250.00	\$41,520.00	\$41,520.00
Phoenix Directional Services: Directional Services				\$4,580.00	\$13,510.00	\$17,180.00	\$6,250.00	\$41,520.00	
9320-342 - DISPOSAL	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$7,800.00	\$0.00	\$7,800.00	\$7,800.00
Cartel Energy Services Ltd: Cement tanks & disposal						\$7,800.00		\$7,800.00	
9320-345 - ENGINEERING DESIGN & SERVICES	\$0.00	\$0.00	\$10,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$10,000.00	\$10,000.00
Codeco-Vanoco: Engineering & Design			\$10,000.00					\$10,000.00	
9320-347 - EQUIPMENT RENTALS	\$0.00	\$0.00	\$500.00	\$4,736.50	\$6,496.50	\$12,446.50	\$11,247.00	\$35,426.50	\$35,426.50
Horizon Drilling: Daily Rental Cost - 2022-01-17 - 1 Rentals			\$500.00	\$500.00	\$1,535.00	\$2,185.00	\$2,185.00	\$6,905.00	
Precision Rentals: Daily Rental Cost - 2022-01-18 - 3 Rentals				\$690.00	\$1,185.00	\$1,185.00	\$1,185.00	\$4,245.00	
Black Diamond: Daily Rental Cost - 2022-01-18 - 3 Rentals				\$464.50	\$564.50	\$564.50	\$564.50	\$2,158.00	
Moose Doktor: Daily Rental Cost - 2022-01-18 - 1 Rentals				\$70.00	\$70.00	\$70.00	\$70.00	\$280.00	
Tango Delta: Daily Rental Cost - 2022-01-18 - 2 Rentals				\$567.00	\$567.00	\$567.00	\$567.00	\$2,268.00	
WTS: Daily Rental Cost - 2022-01-18 - 1 Rentals				\$600.00	\$600.00	\$600.00	\$600.00	\$2,400.00	
Pason: Daily Rental Cost - 2022-01-18 - 1 Rentals				\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$7,200.00	
GFL: Daily Rental Cost - 2022-01-18 - 1 Rentals				\$45.00	\$45.00	\$45.00	\$45.00	\$180.00	
Bulldog: Daily Rental Cost - 2022-01-19 - 1 Rentals					\$130.00	\$130.00	\$130.00	\$390.00	
Rockbusters Oilfield Performance Ltd: Daily Rental Cost - 2022-01-20 - 1 Rentals						\$300.00	\$300.00	\$600.00	
Impulse Down Hole Tools: Service,inspection & reline charge						\$5,000.00		\$5,000.00	
Black Diamond: Delivery & rig up of silicate transfer system							\$1,262.50	\$1,262.50	
Precision Rentals: Rig up of centrifuge & wellsite trailers							\$2,538.00	\$2,538.00	
9320-349 - FREIGHT & HAULING	\$0.00	\$0.00	\$0.00	\$1,860.00	\$0.00	\$1,160.00	\$0.00	\$3,020.00	\$3,020.00
Rockbusters Oilfield Performance Ltd: Haul directional Tools to location				\$1,860.00				\$1,860.00	
Rockbusters Oilfield Performance Ltd: Trucking of Reamer, agitator & jars						\$1,160.00		\$1,160.00	
9320-350 - FLUID TRANSFER & HAULING	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,185.00	\$0.00	\$2,185.00	\$2,185.00
Flex Tank & Vac: Trucking of Silicate & truck flush						\$2,185.00		\$2,185.00	
9320-351 - FUEL	\$0.00	\$0.00	\$0.00	\$0.00	\$19,477.00	\$0.00	\$19,405.99	\$38,882.99	\$38,882.99
Petro Canada: 17824.5L of dyed diesel plus cartage					\$19,477.00			\$19,477.00	
Petro Canada: (Suncor)17743.8L of dyed diesel plus cartage							\$19,405.99	\$19,405.99	
9320-355 - LEASE & ROAD CONSTRUCTION	\$2,130.00	\$495.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,625.00	\$61,716.00
Shawns Oilfield Service: Push snow to boundary of location and access	\$2,130.00							\$2,130.00	
Shawns Oilfield Service: Blade snow on county road before rig move		\$495.00						\$495.00	
9320-365 - MUD/FLUIDS/CHEMICALS	\$0.00	\$0.00	\$0.00	\$1,210.00	\$1,462.50	\$6,189.75	\$18,173.50	\$27,035.75	\$27,035.75
SKS Logistics Ltd: Trucking of dry mud products				\$1,210.00				\$1,210.00	
Uniq Energy Solutions: Daily Mud Cost - 2022-01-19 - 3 Products					\$1,462.50	\$6,189.75	\$17,046.00	\$24,698.25	
SKS Logistics Ltd: Trucking of mud products							\$1,127.50	\$1,127.50	
9320-369 - RIG MOVE IN/MOVE OUT	\$0.00	\$0.00	\$119,255.00	\$330.00	\$0.00	\$0.00	\$0.00	\$119,585.00	\$119,585.00
Tryson Transport: Mob rig and Rentals plus permits			\$119,255.00					\$119,255.00	
Bulldog: Trucking of Polymer injection tank				\$330.00				\$330.00	
9320-372 - SAFETY SERVICES	\$0.00	\$0.00	\$330.00	\$660.00	\$660.00	\$660.00	\$660.00	\$2,970.00	\$2,970.00
Trojan Safety: Medic (0.5Day)			\$330.00					\$330.00	
Trojan Safety: Medic				\$660.00	\$660.00	\$660.00	\$660.00	\$2,640.00	



Initial Drill Daily Costs Breakdown - Week 3
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

9320-375 - SUBSISTANCE / CAMP	\$0.00	\$0.00	\$1,017.50	\$2,220.00	\$2,220.00	\$2,220.00	\$2,220.00	\$9,897.50	\$9,897.50
N/A: Horizon Drilling Crew Substance. (0.5Day)			\$1,017.50					\$1,017.50	
Horizon Drilling: Crew Substance.				\$2,220.00	\$2,220.00	\$2,220.00	\$2,220.00	\$8,880.00	
9320-379 - SURVEY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,947.00
9320-383 - WATER HAULING, TRANSFER & PURCHASE	\$0.00	\$0.00	\$0.00	\$1,550.00	\$1,550.00	\$1,550.00	\$1,550.00	\$6,200.00	\$6,200.00
Liquids Transloading Ltd.: Water Truck (2 Drivers)				\$1,200.00	\$1,200.00	\$1,200.00	\$1,200.00	\$4,800.00	
Liquids Transloading Ltd.: Potable water				\$350.00	\$350.00	\$350.00	\$350.00	\$1,400.00	
9320-385 - WELLSITE SUPERVISION - ENGINEERING	\$0.00	\$0.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$15,000.00	\$15,000.00
N/A: Codeco-Vanoco (Darren Burton & Mike Bowen)			\$3,000.00					\$3,000.00	
Codeco-Vanoco: Darren Burton & Mike Bowen				\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$12,000.00	
9320-387 - WELLSITE SUPERVISION - GEOLOGICAL	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,000.00	\$2,500.00	\$4,500.00	\$4,500.00
Tallman Geological: Geological Supervision						\$2,000.00	\$2,500.00	\$4,500.00	
9320-389 - VACUUM SERVICE	\$0.00	\$0.00	\$0.00	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$6,000.00	\$6,000.00
Liquids Transloading Ltd.: Vac Truck				\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$6,000.00	
DAILY	\$3,500.00	\$495.00	\$141,352.50	\$48,785.17	\$66,916.00	\$151,791.64	\$83,546.49	\$496,386.80	
CUMULATIVE	\$83,360.00	\$83,855.00	\$225,207.50	\$273,992.67	\$340,908.67	\$492,700.31	\$576,246.80		\$576,246.80



Initial Drill Daily Costs Breakdown - Week 4
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

WELL DATA									
NAME	LICENSE #	COST CENTRE	UWI	LOCATION					
BLACKSPUR HZ LEDUC-WB 16-11-51-2	0502001	TBD	100/16-11-051-02W5/00	LEDUC-WB AB, Canada					
DRILLING DATA									
NAME	START DATE	END DATE	AFE #	AFE \$					
Initial Drill	2022-01-17	2022-01-30	21DR0012	\$1,657,265.00					
DAILY BREAKDOWN									
CODE - COST ITEM	2022-01-22	2022-01-23	2022-01-24	2022-01-25	2022-01-26	2022-01-27	2022-01-28	TOTAL	RUN. TOTAL
9320-307 - BITS	\$0.00	\$12,500.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$12,500.00	\$31,500.00
Reed Bits: 159mm TKC63-B1 Rental SN A253526		\$12,500.00						\$12,500.00	
9320-309 - BOILER / STEAMER	\$2,040.00	\$2,040.00	\$2,040.00	\$2,040.00	\$2,040.00	\$2,040.00	\$2,040.00	\$14,280.00	\$22,440.00
Horizon Drilling: Boiler Day Rate	\$2,040.00	\$2,040.00	\$2,040.00	\$2,040.00	\$2,040.00	\$2,040.00	\$2,040.00	\$14,280.00	
9320-313 - CASING - SURFACE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$38,552.50
9320-315 - CASING - INTERMEDIATE	\$0.00	\$0.00	\$157,500.00	\$0.00	\$0.00	\$0.00	\$0.00	\$157,500.00	\$157,500.00
Trimark Tubulars: Int casing cost 1615m @ \$97.5/m			\$157,500.00					\$157,500.00	
9320-316 - CASING ACCESSORIES - SURFACE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,370.95
9320-317 - CASING SERVICES - SURFACE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$9,503.67
9320-318 - CASING ACCESS. - INTERMEDIATE	\$0.00	\$0.00	\$3,256.26	\$6,931.67	\$0.00	\$0.00	\$0.00	\$10,187.93	\$10,187.93
Direct Casing Accessories: Int float equipment			\$3,256.26					\$3,256.26	
Great North Wellhead & Frac: Tubing head & related equipment				\$6,931.67				\$6,931.67	
9320-319 - CASING SERVICES - INTERMEDIATE	\$0.00	\$13,067.50	\$0.00	\$2,390.00	\$385.00	\$0.00	\$0.00	\$15,842.50	\$15,842.50
Derek Casing: Thread Wash, Drift, Tally, Powertongs, eTorque & CRT f/ Intermediate Csg		\$13,067.50						\$13,067.50	
Great North Wellhead & Frac: Land slips & seal, install tubing head & cut & dress casing.				\$2,390.00				\$2,390.00	
Force Inspection Services: Return of 1 unused joint of 177.8mm INT casing					\$385.00			\$385.00	
9320-321 - CEMENTING - SURFACE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$14,898.94
9320-323 - CEMENTING - INTERMEDIATE	\$0.00	\$0.00	\$30,455.77	\$0.00	\$0.00	\$0.00	\$0.00	\$30,455.77	\$30,455.77
Trican Well Services: Cement Intermediate Csg.			\$30,455.77					\$30,455.77	
9320-325 - CONDUCTOR & RAT HOLE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$8,900.00
9320-327 - WELLSITE SUPERVISION - CONSTRUCTION	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$10,292.00
9320-335 - PRESSURE TESTING	\$0.00	\$0.00	\$2,313.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,313.00	\$5,946.00
Semerra: INT Pressure test			\$2,313.00					\$2,313.00	
9320-337 - DRILLING RIG DAYRATE	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$105,000.00	\$172,250.00
Horizon Drilling: Horizon Drilling day rate	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$105,000.00	
9320-341 - DIRECTIONAL DRILLING	\$6,250.00	\$6,250.00	\$14,225.00	\$6,575.00	\$6,575.00	\$6,575.00	\$15,486.00	\$61,936.00	\$103,456.00
Phoenix Directional Services: Directional Services	\$6,250.00	\$6,250.00	\$14,225.00	\$6,575.00	\$6,575.00	\$6,575.00		\$46,450.00	
Phoenix Directional Services: Directional Services + Mileage & Inspection							\$15,486.00	\$15,486.00	
9320-342 - DISPOSAL	\$0.00	\$0.00	\$0.00	\$0.00	\$1,950.00	\$0.00	\$0.00	\$1,950.00	\$9,750.00
Cartel Energy Services Ltd: Cement bin (main hole)					\$1,950.00			\$1,950.00	
9320-345 - ENGINEERING DESIGN & SERVICES	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$10,000.00
9320-347 - EQUIPMENT RENTALS	\$7,446.50	\$7,776.50	\$8,661.50	\$10,011.50	\$10,011.50	\$10,011.50	\$14,611.50	\$68,530.50	\$103,957.00
Precision Rentals: Daily Rental Cost - 2022-01-22 - 4 Rentals	\$1,185.00	\$1,185.00	\$1,185.00	\$1,185.00	\$1,185.00	\$1,185.00	\$1,185.00	\$8,295.00	
Black Diamond: Daily Rental Cost - 2022-01-22 - 4 Rentals	\$564.50	\$564.50	\$464.50	\$464.50	\$464.50	\$464.50	\$464.50	\$3,451.50	
Horizon Drilling: Daily Rental Cost - 2022-01-22 - 4 Rentals	\$2,185.00	\$2,185.00	\$2,185.00	\$2,185.00	\$2,185.00	\$2,185.00	\$2,185.00	\$15,295.00	
Moose Doktor: Daily Rental Cost - 2022-01-22 - 1 Rentals	\$70.00	\$70.00	\$70.00	\$70.00	\$70.00	\$70.00	\$70.00	\$490.00	
Tango Delta: Daily Rental Cost - 2022-01-22 - 2 Rentals	\$567.00	\$567.00	\$567.00	\$567.00	\$567.00	\$567.00	\$567.00	\$3,969.00	
WTS: Daily Rental Cost - 2022-01-22 - 1 Rentals	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$4,200.00	
Pason: Daily Rental Cost - 2022-01-22 - 1 Rentals	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$12,600.00	
Bulldog: Daily Rental Cost - 2022-01-22 - 1 Rentals	\$130.00	\$130.00						\$260.00	
GFL: Daily Rental Cost - 2022-01-22 - 1 Rentals	\$45.00	\$45.00	\$45.00	\$45.00	\$45.00	\$45.00	\$45.00	\$315.00	
Rockbusters Oilfield Performance Ltd: Daily Rental Cost - 2022-01-22 - 1 Rentals	\$300.00	\$300.00						\$600.00	
Bulldog: Turn around on poly tank		\$330.00						\$330.00	
Arrival: Daily Rental Cost - 2022-01-24 - 1 Rentals			\$395.00	\$395.00	\$395.00	\$395.00	\$395.00	\$1,975.00	
Impulse Down Hole Tools: Daily Rental Cost - 2022-01-24 - 1 Rentals			\$1,350.00	\$2,700.00	\$2,700.00	\$2,700.00	\$2,700.00	\$12,150.00	
Arrival: Redress charge							\$4,600.00	\$4,600.00	
9320-349 - FREIGHT & HAULING	\$0.00	\$0.00	\$10,166.86	\$0.00	\$0.00	\$0.00	\$1,900.00	\$12,066.86	\$15,086.86
VDM Trucking Services Ltd: Trucking of INT casing from G.P			\$10,166.86					\$10,166.86	
Tryson Energy Services: Trucking of hwdp							\$1,540.00	\$1,540.00	
Rockbusters Oilfield Performance Ltd: Hotshot mud products to location							\$360.00	\$360.00	
9320-350 - FLUID TRANSFER & HAULING	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,185.00
9320-351 - FUEL	\$0.00	\$16,929.00	\$0.00	\$0.00	\$18,661.00	\$0.00	\$0.00	\$35,590.00	\$74,472.99
Petro Canada: 15601.4L of diesel plus cartage		\$16,929.00						\$16,929.00	
Petro Canada: 17105.7L of diesel plus cartage					\$18,661.00			\$18,661.00	
9320-355 - LEASE & ROAD CONSTRUCTION	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$61,716.00
9320-365 - MUD/FLUIDS/CHEMICALS	\$33,860.00	\$1,536.60	\$3,924.00	\$4,759.44	\$9,234.15	\$11,285.75	\$33,840.77	\$98,440.71	\$125,476.46
Uniq Energy Solutions: Daily Mud Cost - 2022-01-22 - 13 Products	\$33,860.00	\$1,536.60	\$3,924.00	\$4,759.44	\$8,634.15	\$11,285.75	\$33,840.77	\$97,840.71	
SKS Logistics Ltd: Trucking of mud products					\$600.00			\$600.00	
9320-369 - RIG MOVE IN/MOVE OUT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$119,585.00
9320-372 - SAFETY SERVICES	\$660.00	\$660.00	\$660.00	\$660.00	\$660.00	\$660.00	\$660.00	\$4,620.00	\$7,590.00
Trojan Safety: Medic	\$660.00	\$660.00	\$660.00	\$660.00	\$660.00	\$660.00	\$660.00	\$4,620.00	
9320-375 - SUBSISTANCE / CAMP	\$2,220.00	\$2,220.00	\$2,220.00	\$2,220.00	\$2,220.00	\$2,220.00	\$2,220.00	\$15,540.00	\$25,437.50
Horizon Drilling: Crew Substance.	\$2,220.00	\$2,220.00	\$2,220.00	\$2,220.00	\$2,220.00	\$2,220.00	\$2,220.00	\$15,540.00	
9320-379 - SURVEY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,947.00
9320-383 - WATER HAULING, TRANSFER & PURCHASE	\$1,550.00	\$1,550.00	\$1,550.00	\$1,550.00	\$1,550.00	\$1,550.00	\$1,550.00	\$10,850.00	\$17,050.00



Initial Drill Daily Costs Breakdown - Week 4
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

Liquids Transloading Ltd.: Water Truck (2 Drivers)	\$1,200.00	\$1,200.00	\$1,200.00	\$1,200.00	\$1,200.00	\$1,200.00	\$1,200.00	\$8,400.00	
Liquids Transloading Ltd.: Potable water	\$350.00	\$350.00	\$350.00	\$350.00	\$350.00	\$350.00	\$350.00	\$2,450.00	
9320-385 - WELLSITE SUPERVISION - ENGINEERING	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$21,000.00	\$36,000.00
Codeco-Vanoco: Darren Burton & Mike Bowen	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$21,000.00	
9320-387 - WELLSITE SUPERVISION - GEOLOGICAL	\$2,500.00	\$2,500.00	\$2,500.00	\$2,500.00	\$2,500.00	\$2,500.00	\$2,500.00	\$17,500.00	\$22,000.00
Tallman Geological: Geological Supervision	\$2,500.00	\$2,500.00	\$2,500.00	\$2,500.00	\$2,500.00	\$2,500.00	\$2,500.00	\$17,500.00	
9320-389 - VACUUM SERVICE	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$10,500.00	\$16,500.00
Liquids Transloading Ltd.: Vac Truck	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$10,500.00	
9322-413 - CASING - PRODUCTION	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$104,896.10	\$104,896.10	\$104,896.10
Trimark Tubulars: 2099.81m of 114.3mm 20.09kg/m P-110 GBCD casing							\$123,888.79	\$123,888.79	
Trimark Tubulars: Return of 321.91M of 114.3mm 20.09kg/m P-110 GBCD casing							-\$18,992.69	-\$18,992.69	
9322-415 - CASING ACCESSORIES - PRODUCTION	\$0.00	\$0.00	\$0.00	\$2,480.00	\$0.00	\$0.00	\$0.00	\$2,480.00	\$2,480.00
Rockbusters Oilfield Performance Ltd: Deliver frac ports to location				\$2,480.00				\$2,480.00	
9322-417 - CASING SERVICES - PRODUCTION	\$0.00	\$0.00	\$0.00	\$2,762.88	\$6,679.07	\$0.00	\$0.00	\$9,441.95	\$9,441.95
Winalta Transport: Trucking of Production casing & tie back				\$2,762.88				\$2,762.88	
Oculus Transport Ltd: Trucking of production casing from G.P					\$6,679.07			\$6,679.07	
	DAILY	\$76,026.50	\$86,529.60	\$258,972.39	\$64,380.49	\$81,965.72	\$56,342.25	\$199,204.37	\$823,421.32
	CUMULATIVE	\$652,273.30	\$738,802.90	\$997,775.29	\$1,062,155.78	\$1,144,121.50	\$1,200,463.75	\$1,399,668.12	\$1,399,668.12



Initial Drill Daily Costs Breakdown - Week 5
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

WELL DATA					
NAME	LICENSE #	COST CENTRE	UWI	LOCATION	
BLACKSPUR HZ LEDUC-WB 16-11-51-2	0502001	TBD	100/16-11-051-02W5/00	LEDUC-WB AB, Canada	
DRILLING DATA					
NAME	START DATE	END DATE	AFE #	AFE \$	
Initial Drill	2022-01-17	2022-01-30	21DR0012	\$1,657,265.00	
DAILY BREAKDOWN					
CODE - COST ITEM	2022-01-29	2022-01-30	2022-01-31	TOTAL	RUN. TOTAL
9320-307 - BITS	\$0.00	\$0.00	\$0.00	\$0.00	\$31,500.00
9320-309 - BOILER / STEAMER	\$2,040.00	\$2,040.00	-\$3,870.00	\$210.00	\$22,650.00
Horizon Drilling: Boiler Day Rate	\$2,040.00	\$2,040.00	\$2,040.00	\$6,120.00	
Horizon Drilling: Boiler cost correction			-\$5,910.00	-\$5,910.00	
9320-313 - CASING - SURFACE	\$0.00	\$0.00	\$0.00	\$0.00	\$38,552.50
9320-315 - CASING - INTERMEDIATE	\$0.00	\$0.00	\$0.00	\$0.00	\$157,500.00
9320-316 - CASING ACCESSORIES - SURFACE	\$0.00	\$0.00	\$0.00	\$0.00	\$1,370.95
9320-317 - CASING SERVICES - SURFACE	\$0.00	\$0.00	\$0.00	\$0.00	\$9,503.67
9320-318 - CASING ACCESS. - INTERMEDIATE	\$0.00	\$0.00	\$0.00	\$0.00	\$10,187.93
9320-319 - CASING SERVICES - INTERMEDIATE	\$0.00	\$0.00	\$0.00	\$0.00	\$15,842.50
9320-321 - CEMENTING - SURFACE	\$0.00	\$0.00	\$0.00	\$0.00	\$14,898.94
9320-323 - CEMENTING - INTERMEDIATE	\$0.00	\$0.00	\$0.00	\$0.00	\$30,455.77
9320-325 - CONDUCTOR & RAT HOLE	\$0.00	\$0.00	\$0.00	\$0.00	\$8,900.00
9320-327 - WELLSITE SUPERVISION - CONSTRUCTION	\$0.00	\$0.00	\$0.00	\$0.00	\$10,292.00
9320-335 - PRESSURE TESTING	\$0.00	\$1,998.00	\$0.00	\$1,998.00	\$7,944.00
Semerra: Pressure test tubing hanger & hanger seals		\$1,998.00		\$1,998.00	
9320-337 - DRILLING RIG DAYRATE	\$15,000.00	\$25,732.16	-\$11,378.88	\$29,353.28	\$201,603.28
Horizon Drilling: Horizon Drilling day rate	\$15,000.00	\$15,000.00		\$30,000.00	
Force Inspection Services: Inspect HWDP, DCs & Subs		\$10,732.16		\$10,732.16	
Horizon Drilling: Horizon Drilling day rate 16hrs			\$12,500.00	\$12,500.00	
Horizon Drilling: Prorated pipe inspection			\$9,000.00	\$9,000.00	
Horizon Drilling: Cost correction			-\$32,878.88	-\$32,878.88	
9320-341 - DIRECTIONAL DRILLING	\$0.00	\$0.00	\$0.00	\$0.00	\$103,456.00
9320-342 - DISPOSAL	\$0.00	\$77,917.82	\$0.00	\$77,917.82	\$87,667.82
Secure Energy Services: Disposal of mud estimate: 90m3 @ \$125/m3		\$11,250.00		\$11,250.00	
Secure Energy Services: Disposal of drilling fluid & truck flushes		\$24,075.00		\$24,075.00	
Shawns Oilfield Service: Sawdust delivery x 5		\$12,500.00		\$12,500.00	
Shawns Oilfield Service: Trucking of drill cuttings 525 tonnes x \$19/tonne		\$10,197.49		\$10,197.49	
Remedx Remedial Services: Disposal of Int drill cuttings 248.54 tonnes x @23/tonne estimate		\$5,716.42		\$5,716.42	
Remedx Remedial Services: 54.24 tonnes of gel chem cuttings		\$1,247.52		\$1,247.52	
Remedx Remedial Services: Disposal of Polymer drill cuttings 233.93 tonnes		\$5,380.39		\$5,380.39	
Secure Energy Services: Disposal of Drilling mud & truck flushes		\$7,551.00		\$7,551.00	
9320-345 - ENGINEERING DESIGN & SERVICES	\$0.00	\$0.00	\$0.00	\$0.00	\$10,000.00
9320-346 - ENVIRONMENTAL	\$0.00	\$24,391.23	\$0.00	\$24,391.23	\$24,391.23
Secure Energy Services: Environmental Services		\$24,391.23		\$24,391.23	
9320-347 - EQUIPMENT RENTALS	\$6,916.50	\$7,826.50	\$17,935.71	\$32,678.71	\$136,635.71
Precision Rentals: Daily Rental Cost - 2022-01-29 - 4 Rentals	\$1,185.00	\$1,185.00		\$2,370.00	
Black Diamond: Daily Rental Cost - 2022-01-29 - 3 Rentals	\$464.50	\$464.50		\$929.00	
Horizon Drilling: Daily Rental Cost - 2022-01-29 - 4 Rentals	\$2,185.00	\$2,185.00	\$500.00	\$4,870.00	
Moose Doktor: Daily Rental Cost - 2022-01-29 - 1 Rentals	\$70.00	\$70.00		\$140.00	
Tango Delta: Daily Rental Cost - 2022-01-29 - 2 Rentals	\$567.00	\$567.00		\$1,134.00	
WTS: Daily Rental Cost - 2022-01-29 - 1 Rentals	\$600.00	\$600.00	\$600.00	\$1,800.00	
Pason: Daily Rental Cost - 2022-01-29 - 1 Rentals	\$1,800.00	\$1,800.00		\$3,600.00	
GFL: Daily Rental Cost - 2022-01-29 - 1 Rentals	\$45.00	\$45.00	\$45.00	\$135.00	
SKS Logistics Ltd: Hiboy rental		\$910.00		\$910.00	
WTS: Rig in of sewer system & sewer permit			\$1,985.00	\$1,985.00	
Tango Delta: Rig up,Tear out of communications,stadium,cell booster & related equipent & oil change			\$2,730.00	\$2,730.00	
Precision Rentals: Wellsite trailer,centrifuge tear out,well site cleaning,propane & turn around			\$7,395.71	\$7,395.71	
Moose Doktor: Return light tower & turn around			\$650.00	\$650.00	
Horizon Drilling: Shaker screens x2			\$1,130.00	\$1,130.00	
Horizon Drilling: Cost correction for rentals			-\$670.00	-\$670.00	
WTS: Tear out of sewer & combo unit & sewer vac			\$2,310.00	\$2,310.00	
GFL: Pick up & drop off of garbage bin			\$1,260.00	\$1,260.00	
9320-348 - EQUIPMENT HAULING	\$0.00	\$0.00	\$1,292.50	\$1,292.50	\$1,292.50
Providence Trucking Inc.: Return of Trican P-tank			\$1,292.50	\$1,292.50	
9320-349 - FREIGHT & HAULING	\$0.00	\$4,140.00	\$0.00	\$4,140.00	\$19,226.86
Winalta Transport: Clean up of casing,agitators,reamer,Setting tool		\$1,665.00		\$1,665.00	
Gmack Oilfield Services Ltd.: Trucking to return directional tools, Ncs sleeves & disruptor bands		\$2,475.00		\$2,475.00	
9320-350 - FLUID TRANSFER & HAULING	\$0.00	\$12,405.75	\$0.00	\$12,405.75	\$14,590.75
Liquids Transloading Ltd.: Trucking of Int mud & main hole mud		\$12,405.75		\$12,405.75	
9320-351 - FUEL	\$0.00	\$0.00	-\$6,702.50	-\$6,702.50	\$67,770.49
Petro Canada: Cartage to suck out rig & boiler (7400L estimate)			\$697.50	\$697.50	
Petro Canada: 7368L of diesel returned to Petro Can(Credit estimate)			-\$7,400.00	-\$7,400.00	
9320-355 - LEASE & ROAD CONSTRUCTION	\$0.00	\$0.00	\$0.00	\$0.00	\$61,716.00
9320-365 - MUD/FLUIDS/CHEMICALS	\$0.00	\$950.00	-\$2,297.46	-\$1,347.46	\$124,129.00



Initial Drill Daily Costs Breakdown - Week 5
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

SKS Logistics Ltd: Return of mud products		\$950.00		\$950.00	
Uniq Energy Solutions: Cost correction			-\$2,297.46	-\$2,297.46	
9320-369 - RIG MOVE IN/MOVE OUT	\$0.00	\$69,988.00	\$5,320.00	\$75,308.00	\$194,893.00
T-ruckin: Rig move cost estimate		\$50,000.00		\$50,000.00	
Tryson Energy Services: Trucking of Rentals estimate (15 loads plus permit)		\$19,988.00		\$19,988.00	
Shawns Oilfield Service: Supply gravel and blade road			\$5,320.00	\$5,320.00	
9320-371 - RIG UP/RIG OUT	\$0.00	\$0.00	\$36,300.00	\$36,300.00	\$36,300.00
Horizon Drilling: Rig up & tear out man hrs: 300hrs			\$36,300.00	\$36,300.00	
9320-372 - SAFETY SERVICES	\$660.00	\$660.00	\$1,653.15	\$2,973.15	\$10,563.15
Trojan Safety: Medic	\$660.00	\$660.00		\$1,320.00	
Trojan Safety: Medic, demob & sub			\$1,653.15	\$1,653.15	
9320-375 - SUBSISTANCE / CAMP	\$2,220.00	\$2,220.00	\$5,180.00	\$9,620.00	\$35,057.50
Horizon Drilling: Crew Substance.	\$2,220.00	\$2,220.00	\$2,220.00	\$6,660.00	
Horizon Drilling: Cost correction with crew changes			\$2,960.00	\$2,960.00	
9320-379 - SURVEY	\$0.00	\$0.00	\$0.00	\$0.00	\$2,947.00
9320-383 - WATER HAULING, TRANSFER & PURCHASE	\$1,550.00	-\$198.00	\$0.00	\$1,352.00	\$18,402.00
Liquids Transloading Ltd.: Water Truck (2 Drivers)	\$1,200.00			\$1,200.00	
Liquids Transloading Ltd.: Potable water	\$350.00			\$350.00	
Liquids Transloading Ltd.: Water Truck (1 Drivers)		\$1,200.00		\$1,200.00	
Liquids Transloading Ltd.: Potable water cost correction		-\$1,398.00		-\$1,398.00	
9320-385 - WELLSITE SUPERVISION - ENGINEERING	\$3,000.00	\$3,000.00	\$4,500.00	\$10,500.00	\$46,500.00
Codeco-Vanoco: Darren Burton & Mike Bowen	\$3,000.00	\$3,000.00	\$3,000.00	\$9,000.00	
Codeco-Vanoco: Mike Bowen Feb.1			\$1,500.00	\$1,500.00	
9320-387 - WELLSITE SUPERVISION - GEOLOGICAL	\$2,500.00	\$0.00	\$0.00	\$2,500.00	\$24,500.00
Tallman Geological: Geological Supervision	\$2,500.00			\$2,500.00	
9320-389 - VACUUM SERVICE	\$1,500.00	\$1,500.00	\$1,500.00	\$4,500.00	\$21,000.00
Liquids Transloading Ltd.: Vac Truck	\$1,500.00	\$1,500.00	\$1,500.00	\$4,500.00	
9322-413 - CASING - PRODUCTION	\$0.00	\$97,018.42	\$0.00	\$97,018.42	\$201,914.52
Blackspur Oil Corp: 1644.38m of 114.3mm 20.09kg/m P-110 tie back string estimate		\$97,018.42		\$97,018.42	
9322-415 - CASING ACCESSORIES - PRODUCTION	\$146,976.00	\$75,090.00	\$0.00	\$222,066.00	\$224,546.00
Interra Energy Services: 2 Toe Ports	\$6,000.00			\$6,000.00	
NCS Multistage: Tool hands, 52 multiCycle sleeves & Disrupter bands	\$140,976.00			\$140,976.00	
Great North Wellhead & Frac: Install Frac Bonnet & Press. Test		\$1,980.00		\$1,980.00	
Packers Plus: Field techs & primeset production assembly equipment		\$73,110.00		\$73,110.00	
9322-417 - CASING SERVICES - PRODUCTION	\$0.00	\$18,546.70	\$0.00	\$18,546.70	\$27,988.65
Derek Casing: Wash,drift & tally Production string & tie back. Run production string & tie back		\$18,546.70		\$18,546.70	
9322-419 - CEMENTING - PRODUCTION	\$42,410.31	\$0.00	\$0.00	\$42,410.31	\$42,410.31
Trican Well Services: Liner Cement	\$42,410.31			\$42,410.31	
DAILY	\$224,772.81	\$425,226.58	\$49,432.52	\$699,431.91	
CUMULATIVE	\$1,624,440.93	\$2,049,667.51	\$2,099,100.03		\$2,099,100.03



BLACKSPUR HZ LEDUC-WB 16-11-51-2 - Initial Drill Cost Summary
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

WELL DATA				
NAME	LICENSE #	COST CENTRE	UWI	LOCATION
BLACKSPUR HZ LEDUC-WB 16-11-51-2	0502001	TBD	100/16-11-051-02W5/00	LEDUC-WB AB, Canada
DRILLING DATA				
NAME	START DATE	END DATE	AFE #	AFE \$
Initial Drill	2022-01-17	2022-01-30	21DR0012	\$1,657,265.00
Vendor// ARRIVAL				VENDOR TOTAL \$6,575.00
cost code// 9320-347 - EQUIPMENT RENTALS				TOTAL \$6,575.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-24	Daily Rental Cost - 2022-01-24 - 1 Rentals		22-008	\$395.00
2022-01-25	Daily Rental Cost - 2022-01-25 - 1 Rentals		22-008	\$395.00
2022-01-26	Daily Rental Cost - 2022-01-26 - 1 Rentals		22-008	\$395.00
2022-01-27	Daily Rental Cost - 2022-01-27 - 1 Rentals		22-008	\$395.00
2022-01-28	Daily Rental Cost - 2022-01-28 - 1 Rentals		22-008	\$395.00
2022-01-28	Redress charge		022-008	\$4,600.00
Vendor// BLACK DIAMOND				VENDOR TOTAL \$7,801.00
cost code// 9320-347 - EQUIPMENT RENTALS				TOTAL \$7,801.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-18	Daily Rental Cost - 2022-01-18 - 3 Rentals		60104817	\$464.50
2022-01-19	Daily Rental Cost - 2022-01-19 - 4 Rentals		60104817	\$564.50
2022-01-20	Daily Rental Cost - 2022-01-20 - 4 Rentals		60104817	\$564.50
2022-01-21	Delivery & rig up of silicate transfer system		ECA00630	\$1,262.50
2022-01-21	Daily Rental Cost - 2022-01-21 - 4 Rentals		60104817	\$564.50
2022-01-22	Daily Rental Cost - 2022-01-22 - 4 Rentals		60104817	\$564.50
2022-01-23	Daily Rental Cost - 2022-01-23 - 4 Rentals		60104817	\$564.50
2022-01-24	Daily Rental Cost - 2022-01-24 - 3 Rentals		60104817	\$464.50
2022-01-25	Daily Rental Cost - 2022-01-25 - 3 Rentals		60104817	\$464.50
2022-01-26	Daily Rental Cost - 2022-01-26 - 3 Rentals		60104817	\$464.50
2022-01-27	Daily Rental Cost - 2022-01-27 - 3 Rentals		60104817	\$464.50
2022-01-28	Daily Rental Cost - 2022-01-28 - 3 Rentals		60104817	\$464.50
2022-01-29	Daily Rental Cost - 2022-01-29 - 3 Rentals		60104817	\$464.50
2022-01-30	Daily Rental Cost - 2022-01-30 - 3 Rentals		60104817	\$464.50
Vendor// BLACKSPUR OIL CORP				VENDOR TOTAL \$97,018.42
cost code// 9322-413 - CASING - PRODUCTION				TOTAL \$97,018.42
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-30	1644.38m of 114.3mm 20.09kg/m P-110 tie back string estimate		estimate	\$97,018.42
Vendor// BULLDOG				VENDOR TOTAL \$1,310.00
cost code// 9320-347 - EQUIPMENT RENTALS				TOTAL \$980.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-19	Daily Rental Cost - 2022-01-19 - 1 Rentals		10844	\$130.00
2022-01-20	Daily Rental Cost - 2022-01-20 - 1 Rentals		10844	\$130.00
2022-01-21	Daily Rental Cost - 2022-01-21 - 1 Rentals		10844	\$130.00
2022-01-22	Daily Rental Cost - 2022-01-22 - 1 Rentals		10844	\$130.00
2022-01-23	Turn around on poly tank		10844	\$330.00
2022-01-23	Daily Rental Cost - 2022-01-23 - 1 Rentals		10844	\$130.00
cost code// 9320-369 - RIG MOVE IN/MOVE OUT				TOTAL \$330.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-18	Trucking of Polymer injection tank		10743	\$330.00
Vendor// CALTECH SURVEYS				VENDOR TOTAL \$2,947.00
cost code// 9320-379 - SURVEY				TOTAL \$2,947.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2021-11-18	Restake location			\$1,932.00
2022-01-08	Reset well centre 16-11		21-1798-3	\$1,015.00
Vendor// CARTEL ENERGY SERVICES LTD				VENDOR TOTAL \$9,750.00
cost code// 9320-342 - DISPOSAL				TOTAL \$9,750.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-20	Cement tanks & disposal		2022-2019	\$7,800.00
2022-01-26	Cement bin (main hole)		2022-2034	\$1,950.00
Vendor// CODECO-VANOCO				VENDOR TOTAL \$53,500.00
cost code// 9320-345 - ENGINEERING DESIGN & SERVICES				TOTAL \$10,000.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-17	Engineering & Design			\$10,000.00
cost code// 9320-385 - WELLSITE SUPERVISION - ENGINEERING				TOTAL \$43,500.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-18	Darren Burton & Mike Bowen			\$3,000.00
2022-01-19	Darren Burton & Mike Bowen			\$3,000.00
2022-01-20	Darren Burton & Mike Bowen			\$3,000.00
2022-01-21	Darren Burton & Mike Bowen			\$3,000.00
2022-01-22	Darren Burton & Mike Bowen			\$3,000.00
2022-01-23	Darren Burton & Mike Bowen			\$3,000.00
2022-01-24	Darren Burton & Mike Bowen			\$3,000.00
2022-01-25	Darren Burton & Mike Bowen			\$3,000.00
2022-01-26	Darren Burton & Mike Bowen			\$3,000.00
2022-01-27	Darren Burton & Mike Bowen			\$3,000.00
2022-01-28	Darren Burton & Mike Bowen			\$3,000.00
2022-01-29	Darren Burton & Mike Bowen			\$3,000.00
2022-01-30	Darren Burton & Mike Bowen			\$3,000.00
2022-01-31	Mike Bowen Feb.1			\$1,500.00
2022-01-31	Darren Burton & Mike Bowen			\$3,000.00
Vendor// D.LESLIE WELDING				VENDOR TOTAL \$2,530.00
cost code// 9320-317 - CASING SERVICES - SURFACE				TOTAL \$2,530.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-20	Welding for entire well		10275	\$2,530.00
Vendor// DEREK CASING				VENDOR TOTAL \$33,989.20
cost code// 9320-317 - CASING SERVICES - SURFACE				TOTAL \$2,375.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-20	Power tongs for 244.5mm surface casing		10811	\$2,375.00
cost code// 9320-319 - CASING SERVICES - INTERMEDIATE				TOTAL \$13,067.50
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-23	Thread Wash, Drift, Tally, Powertongs, eTorque & CRT f/ Intermediate Csg		10680	\$13,067.50



BLACKSPUR HZ LEDUC-WB 16-11-51-2 - Initial Drill Cost Summary
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

cost code// 9322-417 - CASING SERVICES - PRODUCTION				TOTAL	\$18,546.70
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT	
2022-01-30	Wash,drift & tally Production string & tie back. Run production string & tie back		10681		\$18,546.70
Vendor// DIRECT CASING ACCESSORIES				VENDOR TOTAL	\$4,627.21
cost code// 9320-316 - CASING ACCESSORIES - SURFACE				TOTAL	\$1,370.95
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT	
2022-01-20	Surface casing float equipment		0124		\$1,370.95
cost code// 9320-318 - CASING ACCESS. - INTERMEDIATE				TOTAL	\$3,256.26
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT	
2022-01-24	Int float equipment		128		\$3,256.26
Vendor// DRADER LOCATING INC				VENDOR TOTAL	\$10,292.00
cost code// 9320-327 - WELLSITE SUPERVISION - CONSTRUCTION				TOTAL	\$10,292.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT	
2021-11-18	Travel to location, Restake and sweep location				\$1,415.00
2021-11-19	Meet with land owner, deliver land owner package				\$1,235.00
2021-11-20	Meet with pipeline rep, ramp over pipeline on access				\$1,172.00
2021-11-22	Start to topsoil, Tour Blackspur field				\$1,325.00
2021-11-23	Finish stripping topsoil and subsoil				\$1,190.00
2021-11-24	Rip and strip topsoil on access, Travel to Brooks, Deliver landowner payment, Sweep location				\$1,215.00
2022-01-09	Travel to location, Blade snow to get on location, Drill and cement conductor and mouse hole				\$1,370.00
2022-01-10	Remove snow off lease and access, travel home				\$1,370.00
Vendor// DRILLFORMANCE				VENDOR TOTAL	\$5,500.00
cost code// 9320-307 - BITS				TOTAL	\$5,500.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT	
2022-01-18	311mm Surface bit rental SN/94481		175-307		\$5,500.00
Vendor// ENERGY DRILLING LTD				VENDOR TOTAL	\$8,900.00
cost code// 9320-325 - CONDUCTOR & RAT HOLE				TOTAL	\$8,900.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT	
2022-01-09	Set and cement conductor and mouse hole		T2062		\$8,900.00
Vendor// FLEX TANK & VAC				VENDOR TOTAL	\$2,185.00
cost code// 9320-350 - FLUID TRANSFER & HAULING				TOTAL	\$2,185.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT	
2022-01-20	Trucking of Silicate & truck flush		26650		\$2,185.00
Vendor// FORCE INSPECTION SERVICES				VENDOR TOTAL	\$11,117.16
cost code// 9320-319 - CASING SERVICES - INTERMEDIATE				TOTAL	\$385.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT	
2022-01-26	Return of 1 unused joint of 177.8mm INT casing		A0100003610		\$385.00
cost code// 9320-337 - DRILLING RIG DAYRATE				TOTAL	\$10,732.16
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT	
2022-01-30	Inspect HWDP, DCs & Subs		A023000606		\$10,732.16
Vendor// GFL				VENDOR TOTAL	\$1,890.00
cost code// 9320-347 - EQUIPMENT RENTALS				TOTAL	\$1,890.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT	
2022-01-18	Daily Rental Cost - 2022-01-18 - 1 Rentals		166658		\$45.00
2022-01-19	Daily Rental Cost - 2022-01-19 - 1 Rentals		166658		\$45.00
2022-01-20	Daily Rental Cost - 2022-01-20 - 1 Rentals		166658		\$45.00
2022-01-21	Daily Rental Cost - 2022-01-21 - 1 Rentals		166658		\$45.00
2022-01-22	Daily Rental Cost - 2022-01-22 - 1 Rentals		166658		\$45.00
2022-01-23	Daily Rental Cost - 2022-01-23 - 1 Rentals		166658		\$45.00
2022-01-24	Daily Rental Cost - 2022-01-24 - 1 Rentals		166658		\$45.00
2022-01-25	Daily Rental Cost - 2022-01-25 - 1 Rentals		166658		\$45.00
2022-01-26	Daily Rental Cost - 2022-01-26 - 1 Rentals		166658		\$45.00
2022-01-27	Daily Rental Cost - 2022-01-27 - 1 Rentals		166658		\$45.00
2022-01-28	Daily Rental Cost - 2022-01-28 - 1 Rentals		166658		\$45.00
2022-01-29	Daily Rental Cost - 2022-01-29 - 1 Rentals		166658		\$45.00
2022-01-30	Daily Rental Cost - 2022-01-30 - 1 Rentals		166658		\$45.00
2022-01-31	Pick up & drop off of garbage bin		166658		\$1,260.00
2022-01-31	Daily Rental Cost - 2022-01-31 - 1 Rentals		166658		\$45.00
Vendor// GMACK OILFIELD SERVICES LTD.				VENDOR TOTAL	\$2,475.00
cost code// 9320-349 - FREIGHT & HAULING				TOTAL	\$2,475.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT	
2022-01-30	Trucking to return directional tools, Ncs sleeves & disruptor bands		22-00239		\$2,475.00
Vendor// GREAT NORTH WELLHEAD & FRAC				VENDOR TOTAL	\$14,542.22
cost code// 9320-317 - CASING SERVICES - SURFACE				TOTAL	\$3,240.55
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT	
2022-01-18	Casing bowl & related equipment		SO-1812		\$3,240.55
cost code// 9320-318 - CASING ACCESS. - INTERMEDIATE				TOTAL	\$6,931.67
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT	
2022-01-25	Tubing head & related equipment		RSO09551		\$6,931.67
cost code// 9320-319 - CASING SERVICES - INTERMEDIATE				TOTAL	\$2,390.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT	
2022-01-25	Land slips & seal, install tubing head & cut & dress casing.		32753		\$2,390.00
cost code// 9322-415 - CASING ACCESSORIES - PRODUCTION				TOTAL	\$1,980.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT	
2022-01-30	Install Frac Bonnet & Press. Test		65967		\$1,980.00
Vendor// HALLIBURTON DRILL BITS & SERVICE				VENDOR TOTAL	\$13,500.00
cost code// 9320-307 - BITS				TOTAL	\$13,500.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT	
2022-01-20	222mm GTD54RM Bit Rental. SN/13636522		2662873935-1		\$13,500.00
Vendor// HORIZON DRILLING				VENDOR TOTAL	\$304,141.12
cost code// 9320-309 - BOILER / STEAMER				TOTAL	\$22,650.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT	
2022-01-18	Boiler Day Rate				\$2,040.00
2022-01-19	Boiler Day Rate				\$2,040.00
2022-01-20	Boiler Day Rate				\$2,040.00
2022-01-21	Boiler Day Rate				\$2,040.00
2022-01-22	Boiler Day Rate				\$2,040.00
2022-01-23	Boiler Day Rate				\$2,040.00
2022-01-24	Boiler Day Rate				\$2,040.00
2022-01-25	Boiler Day Rate				\$2,040.00
2022-01-26	Boiler Day Rate				\$2,040.00
2022-01-27	Boiler Day Rate				\$2,040.00



BLACKSPUR HZ LEDUC-WB 16-11-51-2 - Initial Drill Cost Summary
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

2022-01-28	Boiler Day Rate			\$2,040.00
2022-01-29	Boiler Day Rate			\$2,040.00
2022-01-30	Boiler Day Rate			\$2,040.00
2022-01-31	Boiler Day Rate			\$2,040.00
2022-01-31	Boiler cost correction	16543		-\$5,910.00
cost code// 9320-337 - DRILLING RIG DAYRATE				TOTAL \$183,621.12
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-18	Horizon Drilling day rate			\$15,000.00
2022-01-19	Horizon Drilling day rate			\$15,000.00
2022-01-20	Horizon Drilling day rate			\$15,000.00
2022-01-21	Horizon Drilling day rate			\$15,000.00
2022-01-22	Horizon Drilling day rate			\$15,000.00
2022-01-23	Horizon Drilling day rate			\$15,000.00
2022-01-24	Horizon Drilling day rate			\$15,000.00
2022-01-25	Horizon Drilling day rate			\$15,000.00
2022-01-26	Horizon Drilling day rate			\$15,000.00
2022-01-27	Horizon Drilling day rate			\$15,000.00
2022-01-28	Horizon Drilling day rate			\$15,000.00
2022-01-29	Horizon Drilling day rate			\$15,000.00
2022-01-30	Horizon Drilling day rate			\$15,000.00
2022-01-31	Prorated pipe inspection		16543	\$9,000.00
2022-01-31	Horizon Drilling day rate 16hrs			\$12,500.00
2022-01-31	Cost correction		16543	-\$32,878.88
cost code// 9320-347 - EQUIPMENT RENTALS				TOTAL \$27,530.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-17	Daily Rental Cost - 2022-01-17 - 1 Rentals			\$500.00
2022-01-18	Daily Rental Cost - 2022-01-18 - 1 Rentals			\$500.00
2022-01-19	Daily Rental Cost - 2022-01-19 - 3 Rentals			\$1,535.00
2022-01-20	Daily Rental Cost - 2022-01-20 - 4 Rentals			\$2,185.00
2022-01-21	Daily Rental Cost - 2022-01-21 - 4 Rentals			\$2,185.00
2022-01-22	Daily Rental Cost - 2022-01-22 - 4 Rentals			\$2,185.00
2022-01-23	Daily Rental Cost - 2022-01-23 - 4 Rentals			\$2,185.00
2022-01-24	Daily Rental Cost - 2022-01-24 - 4 Rentals			\$2,185.00
2022-01-25	Daily Rental Cost - 2022-01-25 - 4 Rentals			\$2,185.00
2022-01-26	Daily Rental Cost - 2022-01-26 - 4 Rentals			\$2,185.00
2022-01-27	Daily Rental Cost - 2022-01-27 - 4 Rentals			\$2,185.00
2022-01-28	Daily Rental Cost - 2022-01-28 - 4 Rentals			\$2,185.00
2022-01-29	Daily Rental Cost - 2022-01-29 - 4 Rentals			\$2,185.00
2022-01-30	Daily Rental Cost - 2022-01-30 - 4 Rentals			\$2,185.00
2022-01-31	Daily Rental Cost - 2022-01-31 - 1 Rentals			\$500.00
2022-01-31	Shaker screens x2		16543	\$1,130.00
2022-01-31	Cost correction for rentals		16543	-\$670.00
cost code// 9320-371 - RIG UP/RIG OUT				TOTAL \$36,300.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-31	Rig up & tear out man hrs: 300hrs		16543	\$36,300.00
cost code// 9320-375 - SUBSISTANCE / CAMP				TOTAL \$34,040.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-18	Crew Substance.			\$2,220.00
2022-01-19	Crew Substance.			\$2,220.00
2022-01-20	Crew Substance.			\$2,220.00
2022-01-21	Crew Substance.			\$2,220.00
2022-01-22	Crew Substance.			\$2,220.00
2022-01-23	Crew Substance.			\$2,220.00
2022-01-24	Crew Substance.			\$2,220.00
2022-01-25	Crew Substance.			\$2,220.00
2022-01-26	Crew Substance.			\$2,220.00
2022-01-27	Crew Substance.			\$2,220.00
2022-01-28	Crew Substance.			\$2,220.00
2022-01-29	Crew Substance.			\$2,220.00
2022-01-30	Crew Substance.			\$2,220.00
2022-01-31	Cost correction with crew changes		16543	\$2,960.00
2022-01-31	Crew Substance.			\$2,220.00
Vendor// IMPULSE DOWN HOLE TOOLS				VENDOR TOTAL \$17,150.00
cost code// 9320-347 - EQUIPMENT RENTALS				TOTAL \$17,150.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-20	Service inspection & reline charge		7751	\$5,000.00
2022-01-24	Daily Rental Cost - 2022-01-24 - 1 Rentals		7751	\$1,350.00
2022-01-25	Daily Rental Cost - 2022-01-25 - 2 Rentals		7751	\$2,700.00
2022-01-26	Daily Rental Cost - 2022-01-26 - 2 Rentals		7751	\$2,700.00
2022-01-27	Daily Rental Cost - 2022-01-27 - 2 Rentals		7751	\$2,700.00
2022-01-28	Daily Rental Cost - 2022-01-28 - 2 Rentals		7751	\$2,700.00
Vendor// INTERRA ENERGY SERVICES				VENDOR TOTAL \$6,000.00
cost code// 9322-415 - CASING ACCESSORIES - PRODUCTION				TOTAL \$6,000.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-29	2 Toe Ports		IE7135	\$6,000.00
Vendor// LIQUIDS TRANSLOADING LTD.				VENDOR TOTAL \$51,807.75
cost code// 9320-350 - FLUID TRANSFER & HAULING				TOTAL \$12,405.75
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-30	Trucking of Int mud & main hole mud		1019318	\$12,405.75
cost code// 9320-383 - WATER HAULING, TRANSFER & PURCHASE				TOTAL \$18,402.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-18	Water Truck (2 Drivers)		1019317	\$1,200.00
2022-01-18	Potable water			\$350.00
2022-01-19	Potable water			\$350.00
2022-01-19	Water Truck (2 Drivers)			\$1,200.00
2022-01-20	Water Truck (2 Drivers)			\$1,200.00
2022-01-20	Potable water			\$350.00
2022-01-21	Potable water			\$350.00
2022-01-21	Water Truck (2 Drivers)			\$1,200.00
2022-01-22	Water Truck (2 Drivers)			\$1,200.00
2022-01-22	Potable water			\$350.00
2022-01-23	Potable water			\$350.00
2022-01-23	Water Truck (2 Drivers)			\$1,200.00
2022-01-24	Potable water			\$350.00
2022-01-24	Water Truck (2 Drivers)			\$1,200.00
2022-01-25	Potable water			\$350.00
2022-01-25	Water Truck (2 Drivers)			\$1,200.00
2022-01-26	Water Truck (2 Drivers)			\$1,200.00
2022-01-26	Potable water			\$350.00
2022-01-27	Potable water			\$350.00



BLACKSPUR HZ LEDUC-WB 16-11-51-2 - Initial Drill Cost Summary
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

2022-01-27	Water Truck (2 Drivers)			\$1,200.00
2022-01-28	Potable water			\$350.00
2022-01-28	Water Truck (2 Drivers)			\$1,200.00
2022-01-29	Water Truck (2 Drivers)			\$1,200.00
2022-01-29	Potable water			\$350.00
2022-01-30	Potable water cost correction			-\$1,398.00
2022-01-30	Water Truck (1 Drivers)	1019317		\$1,200.00
cost code// 9320-389 - VACUUM SERVICE				TOTAL \$21,000.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-18	Vac Truck		1019315	\$1,500.00
2022-01-19	Vac Truck		1019315	\$1,500.00
2022-01-20	Vac Truck		1019315	\$1,500.00
2022-01-21	Vac Truck		1019315	\$1,500.00
2022-01-22	Vac Truck		1019315	\$1,500.00
2022-01-23	Vac Truck		1019315	\$1,500.00
2022-01-24	Vac Truck		1019315	\$1,500.00
2022-01-25	Vac Truck		1019315	\$1,500.00
2022-01-26	Vac Truck		1019315	\$1,500.00
2022-01-27	Vac Truck		1019315	\$1,500.00
2022-01-28	Vac Truck		1019315	\$1,500.00
2022-01-29	Vac Truck		1019315	\$1,500.00
2022-01-30	Vac Truck		1019315	\$1,500.00
2022-01-31	Vac Truck		1019315	\$1,500.00

vendor// MOOSE DOKTOR				VENDOR TOTAL \$1,560.00
cost code// 9320-347 - EQUIPMENT RENTALS				TOTAL \$1,560.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-18	Daily Rental Cost - 2022-01-18 - 1 Rentals		3618	\$70.00
2022-01-19	Daily Rental Cost - 2022-01-19 - 1 Rentals		3618	\$70.00
2022-01-20	Daily Rental Cost - 2022-01-20 - 1 Rentals		3618	\$70.00
2022-01-21	Daily Rental Cost - 2022-01-21 - 1 Rentals		3618	\$70.00
2022-01-22	Daily Rental Cost - 2022-01-22 - 1 Rentals		3618	\$70.00
2022-01-23	Daily Rental Cost - 2022-01-23 - 1 Rentals		3618	\$70.00
2022-01-24	Daily Rental Cost - 2022-01-24 - 1 Rentals		3618	\$70.00
2022-01-25	Daily Rental Cost - 2022-01-25 - 1 Rentals		3618	\$70.00
2022-01-26	Daily Rental Cost - 2022-01-26 - 1 Rentals		3618	\$70.00
2022-01-27	Daily Rental Cost - 2022-01-27 - 1 Rentals		3618	\$70.00
2022-01-28	Daily Rental Cost - 2022-01-28 - 1 Rentals		3618	\$70.00
2022-01-29	Daily Rental Cost - 2022-01-29 - 1 Rentals		3618	\$70.00
2022-01-30	Daily Rental Cost - 2022-01-30 - 1 Rentals		3620	\$70.00
2022-01-31	Return light tower & turn around		3620	\$650.00

vendor// N/A				VENDOR TOTAL \$11,267.50
cost code// 9320-337 - DRILLING RIG DAYRATE				TOTAL \$7,250.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-17	Horizon Drilling day rate (12Hrs)			\$7,250.00
cost code// 9320-375 - SUBSISTANCE / CAMP				TOTAL \$1,017.50
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-17	Horizon Drilling Crew Substance. (0.5Day)			\$1,017.50
cost code// 9320-385 - WELLSITE SUPERVISION - ENGINEERING				TOTAL \$3,000.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-17	Codeco-Vanoco (Darren Burton & Mike Bowen)			\$3,000.00

vendor// NCS MULTISTAGE				VENDOR TOTAL \$140,976.00
cost code// 9322-415 - CASING ACCESSORIES - PRODUCTION				TOTAL \$140,976.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-29	Tool hands, 52 multiCycle sleeves & Disrupter bands		50893	\$140,976.00

vendor// OCULUS TRANSPORT LTD				VENDOR TOTAL \$6,679.07
cost code// 9322-417 - CASING SERVICES - PRODUCTION				TOTAL \$6,679.07
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-26	Trucking of production casing from G.P		M-4376	\$6,679.07

vendor// PACKERS PLUS				VENDOR TOTAL \$73,110.00
cost code// 9322-415 - CASING ACCESSORIES - PRODUCTION				TOTAL \$73,110.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-30	Field techs & primeset production assembly equipment		SOC037807	\$73,110.00

vendor// PASON				VENDOR TOTAL \$23,400.00
cost code// 9320-347 - EQUIPMENT RENTALS				TOTAL \$23,400.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-18	Daily Rental Cost - 2022-01-18 - 1 Rentals			\$1,800.00
2022-01-19	Daily Rental Cost - 2022-01-19 - 1 Rentals			\$1,800.00
2022-01-20	Daily Rental Cost - 2022-01-20 - 1 Rentals			\$1,800.00
2022-01-21	Daily Rental Cost - 2022-01-21 - 1 Rentals			\$1,800.00
2022-01-22	Daily Rental Cost - 2022-01-22 - 1 Rentals			\$1,800.00
2022-01-23	Daily Rental Cost - 2022-01-23 - 1 Rentals			\$1,800.00
2022-01-24	Daily Rental Cost - 2022-01-24 - 1 Rentals			\$1,800.00
2022-01-25	Daily Rental Cost - 2022-01-25 - 1 Rentals			\$1,800.00
2022-01-26	Daily Rental Cost - 2022-01-26 - 1 Rentals			\$1,800.00
2022-01-27	Daily Rental Cost - 2022-01-27 - 1 Rentals			\$1,800.00
2022-01-28	Daily Rental Cost - 2022-01-28 - 1 Rentals			\$1,800.00
2022-01-29	Daily Rental Cost - 2022-01-29 - 1 Rentals			\$1,800.00
2022-01-30	Daily Rental Cost - 2022-01-30 - 1 Rentals			\$1,800.00

vendor// PETRO CANADA				VENDOR TOTAL \$67,770.49
cost code// 9320-351 - FUEL				TOTAL \$67,770.49
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-19	17824.5L of dyed diesel plus cartage		651189	\$19,477.00
2022-01-21	(Suncor)17743.8L of dyed diesel plus cartage		651191	\$19,405.99
2022-01-23	15601.4L of diesel plus cartage		1949681	\$16,929.00
2022-01-26	17105.7L of diesel plus cartage		006668	\$18,661.00
2022-01-31	Cartage to suck out rig & boiler (7400L estimate)		3144673	\$697.50
2022-01-31	7368L of diesel returned to Petro Can(Credit estimate)			-\$7,400.00

vendor// PHOENIX DIRECTIONAL SERVICES				VENDOR TOTAL \$103,456.00
cost code// 9320-341 - DIRECTIONAL DRILLING				TOTAL \$103,456.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-18	Directional Services			\$4,580.00
2022-01-19	Directional Services			\$13,510.00
2022-01-20	Directional Services			\$17,180.00
2022-01-21	Directional Services			\$6,250.00
2022-01-22	Directional Services			\$6,250.00



BLACKSPUR HZ LEDUC-WB 16-11-51-2 - Initial Drill Cost Summary
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

2022-01-23	Directional Services		\$6,250.00
2022-01-24	Directional Services		\$14,225.00
2022-01-25	Directional Services		\$6,575.00
2022-01-26	Directional Services		\$6,575.00
2022-01-27	Directional Services		\$6,575.00
2022-01-28	Directional Services + Mileage & Inspection	28333	\$15,486.00

Vendor// PRECISION RENTALS				VENDOR TOTAL \$24,843.71
cost code// 9320-347 - EQUIPMENT RENTALS				TOTAL \$24,843.71
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-18	Daily Rental Cost - 2022-01-18 - 3 Rentals		174440	\$690.00
2022-01-19	Daily Rental Cost - 2022-01-19 - 4 Rentals		174440	\$1,185.00
2022-01-20	Daily Rental Cost - 2022-01-20 - 4 Rentals		174440	\$1,185.00
2022-01-21	Rig up of centrifuge & wellsite trailers		DV174440	\$2,538.00
2022-01-21	Daily Rental Cost - 2022-01-21 - 4 Rentals		174440	\$1,185.00
2022-01-22	Daily Rental Cost - 2022-01-22 - 4 Rentals		174440	\$1,185.00
2022-01-23	Daily Rental Cost - 2022-01-23 - 4 Rentals		174440	\$1,185.00
2022-01-24	Daily Rental Cost - 2022-01-24 - 4 Rentals		174440	\$1,185.00
2022-01-25	Daily Rental Cost - 2022-01-25 - 4 Rentals		174440	\$1,185.00
2022-01-26	Daily Rental Cost - 2022-01-26 - 4 Rentals		174440	\$1,185.00
2022-01-27	Daily Rental Cost - 2022-01-27 - 4 Rentals		174440	\$1,185.00
2022-01-28	Daily Rental Cost - 2022-01-28 - 4 Rentals		174440	\$1,185.00
2022-01-29	Daily Rental Cost - 2022-01-29 - 4 Rentals		174440	\$1,185.00
2022-01-30	Daily Rental Cost - 2022-01-30 - 4 Rentals			\$1,185.00
2022-01-31	Wellsite trailer,centrifuge tear out,well site cleaning,propane & turn around		174440	\$7,395.71

Vendor// PROVIDENCE TRUCKING INC.				VENDOR TOTAL \$1,292.50
cost code// 9320-348 - EQUIPMENT HAULING				TOTAL \$1,292.50
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-31	Return of Trican P-tank		27903	\$1,292.50

Vendor// REED BITS				VENDOR TOTAL \$12,500.00
cost code// 9320-307 - BITS				TOTAL \$12,500.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-23	159mm TKC63-B1 Rental SN A253526		017512	\$12,500.00

Vendor// REMEDX REMEDIAL SERVICES				VENDOR TOTAL \$12,344.33
cost code// 9320-342 - DISPOSAL				TOTAL \$12,344.33
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-30	54.24 tonnes of gel chem cuttings		789	\$1,247.52
2022-01-30	Disposal of Int drill cuttings 248.54 tonnes x @23/tonne estimate		790	\$5,716.42
2022-01-30	Disposal of Polymer drill cuttings 233.93 tonnes		798	\$5,380.39

Vendor// ROCKBUSTERS OILFIELD PERFORMANCE LTD				VENDOR TOTAL \$7,060.00
cost code// 9320-347 - EQUIPMENT RENTALS				TOTAL \$1,200.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-20	Daily Rental Cost - 2022-01-20 - 1 Rentals		3536	\$300.00
2022-01-21	Daily Rental Cost - 2022-01-21 - 1 Rentals		3536	\$300.00
2022-01-22	Daily Rental Cost - 2022-01-22 - 1 Rentals		3536	\$300.00
2022-01-23	Daily Rental Cost - 2022-01-23 - 1 Rentals		3536	\$300.00
cost code// 9320-349 - FREIGHT & HAULING				TOTAL \$3,380.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-18	Haul directional Tools to location		3660	\$1,860.00
2022-01-20	Trucking of Reamer, agitator & jars		3661	\$1,160.00
2022-01-28	Hotshot mud products to location		5492	\$360.00
cost code// 9322-415 - CASING ACCESSORIES - PRODUCTION				TOTAL \$2,480.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-25	Deliver frac ports to location		3663	\$2,480.00

Vendor// SECURE ENERGY SERVICES				VENDOR TOTAL \$67,267.23
cost code// 9320-342 - DISPOSAL				TOTAL \$42,876.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-30	Disposal of mud estimate: 90m3 @ \$125/m3		estimate	\$11,250.00
2022-01-30	Disposal of Drilling mud & truck flushes		293-1	\$7,551.00
2022-01-30	Disposal of drilling fluid & truck flushes		025560	\$24,075.00
cost code// 9320-346 - ENVIRONMENTAL				TOTAL \$24,391.23
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-30	Environmental Services		10876	\$24,391.23

Vendor// SEMERRA				VENDOR TOTAL \$7,944.00
cost code// 9320-335 - PRESSURE TESTING				TOTAL \$7,944.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-20	Pressure Test Well Control Equipment + 300L Glycol		51712	\$3,633.00
2022-01-24	INT Pressure test		51714	\$2,313.00
2022-01-30	Pressure test tubing hanger & hanger seals		49301	\$1,998.00

Vendor// SHAWNS OILFIELD SERVICE				VENDOR TOTAL \$89,157.49
cost code// 9320-342 - DISPOSAL				TOTAL \$22,697.49
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-30	Trucking of drill cuttings 525 tonnes x \$19/tonne		5203	\$10,197.49
2022-01-30	Sawdust delivery x 5		5203	\$12,500.00
cost code// 9320-355 - LEASE & ROAD CONSTRUCTION				TOTAL \$61,140.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2021-11-20	Haul and place mats over pipeline, Haul D8N and D6R to location		5060	\$4,445.00
2021-11-22	Start to strip location		5061	\$4,350.00
2021-11-23	Finish stripping topsoil and subsoil		5062	\$4,350.00
2021-11-24	Rip and strip topsoil on access, start to build road		5065	\$4,350.00
2021-11-25	Build access road, Haul hoe to location		5067	\$4,355.00
2021-11-26	Build road		5071	\$6,545.00
2021-11-27	Build road and lease		5074	\$7,000.00
2021-11-28	Build road, level lease		5076	\$7,835.00
2021-11-29	Deliver and install 3 10m culverts, Blade road and access		5078	\$6,410.00
2021-11-30	Haul and spread gravel on road, Blade road			\$7,320.00
2022-01-09	Travel to location Blade access and around well center for rat hole rig		5161	\$1,555.00
2022-01-10	Push snow to boundary of location and access		5162	\$2,130.00
2022-01-15	Blade snow on county road before rig move		5164	\$495.00
cost code// 9320-369 - RIG MOVE IN/MOVE OUT				TOTAL \$5,320.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-31	Supply gravel and blade road		5207	\$5,320.00

Vendor// SKS LOGISTICS LTD				VENDOR TOTAL \$4,797.50
cost code// 9320-347 - EQUIPMENT RENTALS				TOTAL \$910.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT



BLACKSPUR HZ LEDUC-WB 16-11-51-2 - Initial Drill Cost Summary
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

2022-01-30	Hiboy rental	40593		\$910.00
cost code// 9320-365 - MUD/FLUIDS/CHEMICALS				TOTAL \$3,887.50
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-18	Trucking of dry mud products		40488	\$1,210.00
2022-01-21	Trucking of mud products		40584	\$1,127.50
2022-01-26	Trucking of mud products		39642	\$600.00
2022-01-30	Return of mud products		40497	\$950.00

Vendor// T-RUCKIN				VENDOR TOTAL \$50,000.00
cost code// 9320-369 - RIG MOVE IN/MOVE OUT				TOTAL \$50,000.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-30	Rig move cost estimate		estimate	\$50,000.00

Vendor// TALLMAN GEOLOGICAL				VENDOR TOTAL \$24,500.00
cost code// 9320-387 - WELLSITE SUPERVISION - GEOLOGICAL				TOTAL \$24,500.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-20	Geological Supervision			\$2,000.00
2022-01-21	Geological Supervision			\$2,500.00
2022-01-22	Geological Supervision			\$2,500.00
2022-01-23	Geological Supervision			\$2,500.00
2022-01-24	Geological Supervision			\$2,500.00
2022-01-25	Geological Supervision			\$2,500.00
2022-01-26	Geological Supervision			\$2,500.00
2022-01-27	Geological Supervision			\$2,500.00
2022-01-28	Geological Supervision			\$2,500.00
2022-01-29	Geological Supervision			\$2,500.00

Vendor// TANGO DELTA				VENDOR TOTAL \$10,101.00
cost code// 9320-347 - EQUIPMENT RENTALS				TOTAL \$10,101.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-18	Daily Rental Cost - 2022-01-18 - 2 Rentals		11-3372	\$567.00
2022-01-19	Daily Rental Cost - 2022-01-19 - 2 Rentals		11-3372	\$567.00
2022-01-20	Daily Rental Cost - 2022-01-20 - 2 Rentals		11-3372	\$567.00
2022-01-21	Daily Rental Cost - 2022-01-21 - 2 Rentals		11-3372	\$567.00
2022-01-22	Daily Rental Cost - 2022-01-22 - 2 Rentals		11-3372	\$567.00
2022-01-23	Daily Rental Cost - 2022-01-23 - 2 Rentals		11-3372	\$567.00
2022-01-24	Daily Rental Cost - 2022-01-24 - 2 Rentals		11-3372	\$567.00
2022-01-25	Daily Rental Cost - 2022-01-25 - 2 Rentals		11-3372	\$567.00
2022-01-26	Daily Rental Cost - 2022-01-26 - 2 Rentals		11-3372	\$567.00
2022-01-27	Daily Rental Cost - 2022-01-27 - 2 Rentals		11-3372	\$567.00
2022-01-28	Daily Rental Cost - 2022-01-28 - 2 Rentals		11-3372	\$567.00
2022-01-29	Daily Rental Cost - 2022-01-29 - 2 Rentals		11-3372	\$567.00
2022-01-30	Daily Rental Cost - 2022-01-30 - 2 Rentals		11-3372	\$567.00
2022-01-31	Rig up, Tear out of communications, stadium, cell booster & related equipent & oil change		11-3372	\$2,730.00

Vendor// TOPNOTCH				VENDOR TOTAL \$576.00
cost code// 9320-355 - LEASE & ROAD CONSTRUCTION				TOTAL \$576.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2021-11-18	Sweep location and access for buried facilities		10692	\$576.00

Vendor// TRICAN WELL SERVICES				VENDOR TOTAL \$87,765.02
cost code// 9320-321 - CEMENTING - SURFACE				TOTAL \$14,898.94
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-20	Surface cement cost (15 tonne)		T-18815	\$14,898.94
cost code// 9320-323 - CEMENTING - INTERMEDIATE				TOTAL \$30,455.77
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-24	Cement Intermediate Csq.		CE-7003193	\$30,455.77
cost code// 9322-419 - CEMENTING - PRODUCTION				TOTAL \$42,410.31
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-29	Liner Cement		T-19306	\$42,410.31

Vendor// TRIMARK TUBULARS				VENDOR TOTAL \$300,948.60
cost code// 9320-313 - CASING - SURFACE				TOTAL \$38,552.50
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-20	Surface casing cost		15-1806	\$38,552.50
cost code// 9320-315 - CASING - INTERMEDIATE				TOTAL \$157,500.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-24	Int casing cost 1615m @ \$97.5/m		estimate	\$157,500.00
cost code// 9322-413 - CASING - PRODUCTION				TOTAL \$104,896.10
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-28	2099.81m of 114.3mm 20.09kg/m P-110 GBCD casing		15-1806	\$123,888.79
2022-01-28	Return of 321.91M of 114.3mm 20.09kg/m P-110 GBCD casing		15-1806CR	-\$18,992.69

Vendor// TROJAN SAFETY				VENDOR TOTAL \$10,563.15
cost code// 9320-372 - SAFETY SERVICES				TOTAL \$10,563.15
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-17	Medic (0.5Day)			\$330.00
2022-01-18	Medic			\$660.00
2022-01-19	Medic			\$660.00
2022-01-20	Medic			\$660.00
2022-01-21	Medic			\$660.00
2022-01-22	Medic			\$660.00
2022-01-23	Medic			\$660.00
2022-01-24	Medic			\$660.00
2022-01-25	Medic			\$660.00
2022-01-26	Medic			\$660.00
2022-01-27	Medic			\$660.00
2022-01-28	Medic			\$660.00
2022-01-29	Medic			\$660.00
2022-01-30	Medic			\$660.00
2022-01-31	Medic, demob & sub			\$1,653.15

Vendor// TRYSON ENERGY SERVICES				VENDOR TOTAL \$21,540.00
cost code// 9320-349 - FREIGHT & HAULING				TOTAL \$1,540.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-28	Trucking of hwdp		2201-59A	\$1,540.00
cost code// 9320-369 - RIG MOVE IN/MOVE OUT				TOTAL \$19,988.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-30	Trucking of Rentals estimate (15 loads plus permit)		2202-03	\$19,988.00

Vendor// TRYSON TRANSPORT				VENDOR TOTAL \$119,255.00
cost code// 9320-369 - RIG MOVE IN/MOVE OUT				TOTAL \$119,255.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT



BLACKSPUR HZ LEDUC-WB 16-11-51-2 - Initial Drill Cost Summary
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

2022-01-17	Mob rig and Rentals plus permits	2201-44B	\$119,255.00
------------	----------------------------------	----------	--------------

Vendor// UNIQ ENERGY SOLUTIONS				VENDOR TOTAL
cost code// 9320-365 - MUD/FLUIDS/CHEMICALS				\$120,241.50
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-19	Daily Mud Cost - 2022-01-19 - 3 Products			\$1,462.50
2022-01-20	Daily Mud Cost - 2022-01-20 - 3 Products			\$6,189.75
2022-01-21	Daily Mud Cost - 2022-01-21 - 8 Products			\$17,046.00
2022-01-22	Daily Mud Cost - 2022-01-22 - 13 Products			\$33,860.00
2022-01-23	Daily Mud Cost - 2022-01-23 - 2 Products			\$1,536.60
2022-01-24	Daily Mud Cost - 2022-01-24 - 5 Products			\$3,924.00
2022-01-25	Daily Mud Cost - 2022-01-25 - 6 Products			\$4,759.44
2022-01-26	Daily Mud Cost - 2022-01-26 - 7 Products			\$8,634.15
2022-01-27	Daily Mud Cost - 2022-01-27 - 8 Products			\$11,285.75
2022-01-28	Daily Mud Cost - 2022-01-28 - 7 Products			\$33,840.77
2022-01-31	Cost correction			-\$2,297.46

Vendor// VDM TRUCKING SERVICES LTD				VENDOR TOTAL
cost code// 9320-349 - FREIGHT & HAULING				\$10,166.86
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-24	Trucking of INT casing from G.P		58288	\$10,166.86

Vendor// WINALTA TRANSPORT				VENDOR TOTAL
cost code// 9320-317 - CASING SERVICES - SURFACE				\$1,358.12
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-18	Haul surface csq to location		90926	\$1,358.12
cost code// 9320-349 - FREIGHT & HAULING				TOTAL
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-30	Clean up of casing.agitators,reamer.Setting tool		82864	\$1,665.00
cost code// 9322-417 - CASING SERVICES - PRODUCTION				TOTAL
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-25	Trucking of Production casing & tie back		82862	\$2,762.88

Vendor// WTS				VENDOR TOTAL
cost code// 9320-347 - EQUIPMENT RENTALS				\$12,695.00
DAILY REPORT	DESCRIPTION	PURCHASE ORDER	TICKET	AMOUNT
2022-01-18	Daily Rental Cost - 2022-01-18 - 1 Rentals		18651	\$600.00
2022-01-19	Daily Rental Cost - 2022-01-19 - 1 Rentals		18651	\$600.00
2022-01-20	Daily Rental Cost - 2022-01-20 - 1 Rentals		18651	\$600.00
2022-01-21	Daily Rental Cost - 2022-01-21 - 1 Rentals		18651	\$600.00
2022-01-22	Daily Rental Cost - 2022-01-22 - 1 Rentals		18651	\$600.00
2022-01-23	Daily Rental Cost - 2022-01-23 - 1 Rentals		18651	\$600.00
2022-01-24	Daily Rental Cost - 2022-01-24 - 1 Rentals		18651	\$600.00
2022-01-25	Daily Rental Cost - 2022-01-25 - 1 Rentals		18651	\$600.00
2022-01-26	Daily Rental Cost - 2022-01-26 - 1 Rentals		18651	\$600.00
2022-01-27	Daily Rental Cost - 2022-01-27 - 1 Rentals		18651	\$600.00
2022-01-28	Daily Rental Cost - 2022-01-28 - 1 Rentals		18651	\$600.00
2022-01-29	Daily Rental Cost - 2022-01-29 - 1 Rentals		18651	\$600.00
2022-01-30	Daily Rental Cost - 2022-01-30 - 1 Rentals		18651	\$600.00
2022-01-31	Rig in of sewer system & sewer permit		18651	\$1,985.00
2022-01-31	Daily Rental Cost - 2022-01-31 - 1 Rentals		18651	\$600.00
2022-01-31	Tear out of sewer & combo unit & sewer vac		18561	\$2,310.00

GRAND TOTAL				\$2,099,100.03
--------------------	--	--	--	-----------------------



Initial Drill Invoices
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

WELL DATA						
NAME		LICENSE #	COST CENTRE	UWI	LOCATION	
BLACKSPUR HZ LEDUC-WB 16-11-51-2		0502001	TBD	100/16-11-051-02W5/00	LEDUC-WB AB, Canada	
DRILLING DATA						
NAME		START DATE	END DATE	AFE #	AFE \$	
Initial Drill		2022-01-17	2022-01-30	21DR0012	\$1,657,265.00	
INVOICE SUMMARY						
# of INVOICES	INVOICE TOTAL	TICKET TOTAL	TOTAL VARIANCE	ASSIGNED ITEMS	REMAINING ITEMS	REMAINING TOTAL
0	\$0.00	\$0.00	\$0.00	0	388	\$2,099,100.03

WELL DATA				
NAME	LICENSE #	COST CENTRE	UWI	LOCATION
BLACKSPUR HZ LEDUC-WB 16-11-51-2	0502001	TBD	100/16-11-051-02W5/00	LEDUC-WB AB, Canada
DRILLING DATA				
NAME	START DATE	END DATE	AFE #	AFE AMOUNT
Initial Drill	2022-01-17	2022-01-30	21DR0012	\$1,657,265.00
Initial Drill Remarks				

WELL DATA				
NAME	LICENSE #	COST CENTRE	UWI	LOCATION
BLACKSPUR HZ LEDUC-WB 16-11-51-2	0502001	TBD	100/16-11-051-02W5/00	LEDUC-WB AB, Canada
DRILLING DATA				
NAME	START DATE	END DATE	AFE #	AFE AMOUNT
Initial Drill	2022-01-17	2022-01-30	21DR0012	\$1,657,265.00

1 - Outgoing Transfer

DATE	LOCATION	LOCATION AFE#	CARRIER	APPROVED BY
2022-01-24	16-11-51-2w5	21DR0012	Oculus	Mike Bowen
MANUFACTURER	DESCRIPTION	CONDITION	COUNT	UNIT
Force G.P	1 new Joint of 177.8mm P110 GeoCon	A - NEW	1	Joint
				QUANTITY
				VALUE
				1
				\$1,131.00

2 - Outgoing Transfer

DATE	LOCATION	LOCATION AFE#	CARRIER	APPROVED BY
2022-01-25	16-11-51-2w5	21DR0012	Winalta	Mike Bowen
MANUFACTURER	DESCRIPTION	CONDITION	COUNT	UNIT
KSP Steel	33.5m of 244.5mm 53.57KG LT/C	A - NEW	3	Joints
				QUANTITY
				VALUE
				3
				\$4,185.00

3 - Outgoing Transfer

DATE	LOCATION	LOCATION AFE#	CARRIER	APPROVED BY
2022-01-30	16-11-51-2w5	21DR0012	Gmack	Mike Bowen
MANUFACTURER	DESCRIPTION	CONDITION	COUNT	UNIT
NCS	13 multiCycle sleeves & 105 Disrupter bands	A - NEW	118	Pieces
				QUANTITY
				VALUE

4 - Outgoing Transfer

DATE	LOCATION	LOCATION AFE#	CARRIER	APPROVED BY
2022-01-30	16-11-51-2w5	21DR0012	Winalta	Mike Bowen
MANUFACTURER	DESCRIPTION	CONDITION	COUNT	UNIT
Trimark Tubulars (Winalta)	24 joints of 114.3mm P-110 20.09kg GBCD	A - NEW	24	joints
Shawcor	4 joints 114.3mm P-110 HC 20.09kg/m, BTC	A - NEW	4	Joints
Arrival Oil tools	Typhoon Reamer	B - USED	1	Joint
Impulse	2x ball drop agitators(1 new, 1 used)	B - USED	2	Joints
Impulse	Pelican case	B - USED	1	Case



Section 8

Casing Tallies & Cement

TYPES																								
Item	OD		Drift		Weight		Grade	Range		Thread		Coupl	Cond	Supp		Make		Serial						
S01	Float Collar		244.5 mm		0.0 mm		0.0 kg/m						New	Weatherford										
S02	Float Shoe		244.5 mm		0.0 mm		0.0 kg/m						New	Weatherford										
S03	Casing Joint		244.5 mm		226.6 mm		53.7 kg/m		J55	3		LTC		New	Trimark		KSP Steel							
TALLY																								
#	#	Typ	Len	I	C	Top	Total	#	#	Typ	Len	I	C	Top	Total	#	#	Typ	Len	I	C	Top	Total	
1		S02	0.49	•		270.5	0.5	11	9	S03	11.31	•		168.1	102.9	21	19	S03	11.35	•		55.5	215.5	
2	1	S03	11.33	•		259.2	11.8	12	10	S03	11.32	•	C	156.8	114.2	22	20	S03	11.33	•		44.2	226.8	
3		S01	0.37	•		258.8	12.2	13	11	S03	11.34	•		145.5	125.5	23	21	S03	11.29	•		32.9	238.1	
4	2	S03	11.33	•	C	247.5	23.5	14	12	S03	11.10	•		134.4	136.6	24	22	S03	11.32	•	C	21.6	249.4	
5	3	S03	11.35	•		236.1	34.9	15	13	S03	11.09	•		123.3	147.7	25	23	S03	11.34	•		10.2	260.8	
6	4	S03	11.35	•		224.8	46.2	16	14	S03	11.31	•	C	112.0	159.0	26	24	S03	11.12	•		-0.9	271.9	
7	5	S03	11.33	•		213.5	57.6	17	15	S03	11.30	•		100.7	170.3	27	25	S03	11.30	•				
8	6	S03	11.31	•	C	202.1	68.9	18	16	S03	11.34	•		89.3	181.7	28	26	S03	11.20	•				
9	7	S03	11.34	•		190.8	80.2	19	17	S03	11.13	•		78.2	192.8	29	27	S03	11.35	•				
10	8	S03	11.35	•		179.5	91.6	20	18	S03	11.34	•	C	66.9	204.1									

			RUN DATE		-
			PULLED DATE		-
			#	LENGTH	
joints Delivered:			27	304.87 m	
joints On Lease			27	304.87 m	
joints OUT			3	33.85 m	
joints IN			24	271.02 m	
accessory IN			0	0.00 m	
shoe				0.49 m	
collar				0.37 m	
stick-up				0.88 m	
landed at				271.00 m	
Remarks					
3 Jts Stay Out					

GENERAL & ELEVATIONS									
DATE	KB	GROUND		HOLE DEPTH		HOLE SIZE			
2022-01-20	748 m	742 m		271 m		311 mm			
CEMENT TYPES									
AMOUNT	TYPE	COMPANY	VOL	YIELD	EXCESS	EST TOP	RETURNS	DENSITY	
	(t)			(m³)	(m³/t)	(%)	(m)	(m³)	(kg/m³)
15.00	TSC 1700-S Bulk Cement	Trican		14.09	0.9390	80.00	0.00	4.50	1,700.00
Additives: 0.4% TLA, 0.4% AFA-7, 2% Calcium Chloride.									
OPERATIONAL DETAILS									
MUD									
TYPE	DENSITY		VISCOSITY		PH				
Gel chem	1,100 kg/m³		50 s/l		7				
TIMES									
END CIRCULATING	PIPE STARTED		ON BOTTOM		RIG TO CEMENT				
01:45	04:40		06:00		06:45				
START MIXING CEMENT	END MIXING CEMENT		CALCULATE DISPLACEMENT		WATER AHEAD				
06:47	07:05		10:44		3				
START DISPLACING	END DISPLACING		DISPLACEMENT TIME						
07:08	07:24		16						
PRESSURES									
BREAK CIRCULATION	CIRCULATING		FINAL PRESSURE		BUMP PRESSURE		BUMPED BY		
800 kpa	1,200 kpa		2,500 kpa		9,000 kpa		65000		
MAX PUMP PRESSURE	FLOAT HELD		TOP PLUG		BOTTOM PLUG		STRING WEIGHT		
2,500 kpa	Yes		Rubber		None		20 daN		
REMARKS									
Rig in Trican & cement casing, Pump 3m3 water, pressure test lines. Pump 15t (14.09m3)(80% XS) of TSC 1700-S Bulk Cement (1700kg/m3) with 0.4% TLA, 0.4% AFA-7, 2% Calcium Chloride. Drop plug & displace with 10.43m3 of fresh water ,bump plug 5Mpa over circulation pressure, hold for 5 min., bleed off & check floats , pressure test the casing to 1.4MPa low & 14MPa high for 10min each. Plug down @ 7:24, 4.5m3 good cement returns.									



TALLY																																
#	#	Typ	Len	I	C	Top	Total	#	#	Typ	Len	I	C	Top	Total	#	#	Typ	Len	I	C	Top	Total	#	#	Typ	Len	I	C	Top	Total	
1		101	0.50			1,614.5	0.5	11	9	103	13.64			1,493.8	121.2	21	19	103	13.89			1,356.1	258.9	31	29	103	13.85			1,219.5	395.5	
2	1	103	13.84			1,600.7	14.3	12	10	103	13.70		S	1,480.1	134.9	22	20	103	13.88		S	1,342.2	272.8	32	30	103	10.53		S	1,209.0	406.0	
3		102	0.41			1,600.3	14.8	13	11	103	13.84			1,466.2	148.8	23	21	103	13.88			1,328.4	286.7	33	31	103	13.84			1,195.1	419.9	
4	2	103	13.77		S	1,586.5	28.5	14	12	103	13.84		S	1,452.4	162.6	24	22	103	13.62		S	1,314.7	300.3	34	32	103	13.58		S	1,181.5	433.5	
5	3	103	13.79			1,572.7	42.3	15	13	103	13.49			1,438.9	176.1	25	23	103	13.86			1,300.9	314.1	35	33	103	13.89			1,167.7	447.4	
6	4	103	13.71		S	1,559.0	56.0	16	14	103	13.84		S	1,425.1	189.9	26	24	103	12.53		S	1,288.3	326.7	36	34	103	13.84		S	1,153.8	461.2	
7	5	103	11.33			1,547.7	67.4	17	15	103	13.84			1,411.2	203.8	27	25	103	13.89			1,274.5	340.6	37	35	103	12.97			1,140.8	474.2	
8	6	103	13.84		S	1,533.8	81.2	18	16	103	13.51		S	1,397.7	217.3	28	26	103	13.84		S	1,260.6	354.4	38	36	103	13.85		S	1,127.0	488.0	
9	7	103	13.89			1,519.9	95.1	19	17	103	13.84			1,383.9	231.1	29	27	103	13.63			1,247.0	368.0	39	37	103	13.85			1,113.1	501.9	
10	8	103	12.50		S	1,507.4	107.6	20	18	103	13.88		S	1,370.0	245.0	30	28	103	13.64		S	1,233.3	381.7	40	38	103	13.85		S	1,099.3	515.7	

#	#	Typ	Len	I	C	Top	Total	#	#	Typ	Len	I	C	Top	Total	#	#	Typ	Len	I	C	Top	Total	#	#	Typ	Len	I	C	Top	Total		
81	79	103	11.70	•		606.7	1,008.4	91	89	103	11.71	•		490.4	1,124.6	101	99	103	11.71	•			373.4	1,241.6	111	109	103	11.70	•		256.3	1,358.7	
82	80	103	11.66	•	B	595.0	1,020.0	92	90	103	11.71	•		478.7	1,136.3	102	100	103	11.70	•	B		361.7	1,253.3	112	110	103	11.71	•		244.6	1,370.4	
83	81	103	11.71	•		583.3	1,031.7	93	91	103	11.70	•		467.0	1,148.0	103	101	103	11.71	•			350.0	1,265.0	113	111	103	11.61	•		233.0	1,382.0	
84	82	103	11.70	•		571.6	1,043.4	94	92	103	11.70	•	B		455.3	1,159.7	104	102	103	11.71	•			338.3	1,276.7	114	112	103	11.69	•	B	221.3	1,393.7
85	83	103	11.57	•		560.0	1,055.0	95	93	103	11.72	•		443.6	1,171.4	105	103	103	11.71	•			326.6	1,288.5	115	113	103	11.71	•		209.6	1,405.4	
86	84	103	11.45	•	B	548.6	1,066.4	96	94	103	11.70	•		431.9	1,183.1	106	104	103	11.71	•	B		314.8	1,300.2	116	114	103	11.70	•		197.9	1,417.1	
87	85	103	11.58	•		537.0	1,078.0	97	95	103	11.68	•		420.2	1,194.8	107	105	103	11.70	•			303.1	1,311.9	117	115	103	11.70	•		186.2	1,428.8	
88	86	103	11.41	•		525.6	1,089.4	98	96	103	11.69	•	B		408.5	1,206.5	108	106	103	11.70	•			291.4	1,323.6	118	116	103	11.70	•	B	174.5	1,440.5
89	87	103	11.71	•		513.9	1,101.1	99	97	103	11.74	•		396.8	1,218.2	109	107	103	11.71	•			279.7	1,335.3	119	117	103	11.70	•		162.8	1,452.2	
90	88	103	11.72	•	B	502.1	1,112.9	100	98	103	11.70	•		385.1	1,229.9	110	108	103	11.70	•	B		268.0	1,347.0	120	118	103	11.71	•		151.1	1,463.9	

	RUN DATE	-
	PULLED DATE	-
	#	LENGTH
joints Delivered:	132	1,626.53 m
joints On Lease	132	1,626.53 m
joints OUT	1	11.66 m
joints IN	131	1,614.87 m
accessory IN	0	0.00 m
shoe		0.50 m
collar		0.41 m
stick-up		0.78 m
landed at		1,615.00 m
Remarks		
Run 131 Joints. Joint 132 is out		

RUN DATE		
PULLED DATE		
	#	LENGTH
joints Delivered:	132	1,626.53 m
joints On Lease	132	1,626.53 m
joints OUT	1	11.66 m
joints IN	131	1,614.87 m
accessory IN	0	0.00 m
shoe		0.50 m
collar		0.41 m
stick-up		0.78 m
landed at		1,615.00 m
Remarks		
Run 131 Joints. Joint 132 is out		

GENERAL & ELEVATIONS									
DATE	KB	GROUND		HOLE DEPTH			HOLE SIZE		
2022-01-24	748 m	742 m		1,615 m			222 mm		
CEMENT TYPES									
AMOUNT	TYPE	COMPANY	VOL	YIELD	EXCESS	EST TOP	RETURNS	DENSITY	
	(t)			(m³)	(m³/t)	(%)	(m)	(m³)	(kg/m³)
1.42	Scavenger	Trican		3.00	2.1200	0.00	0.00	3.00	1,300.00
Additives: 2% OGC-60 + 4% AFA-7									
14.57	Titanium 1400-S	Trican		23.20	1.5920	90.00	0.00	9.00	1,400.00
Additives: 2% OGC-60 + 4% AFA-7									
16.00	T.A.C.-S	Trican		17.04	1.0650	90.00	990.00	0.00	1,600.00
Additives: 0.2% AFA-7 + 0.4% TWR-4 + 0.5% Gel + 0.2% TDH-2 + 0.2% CFR-12									
OPERATIONAL DETAILS									
MUD									
TYPE	DENSITY			VISCOSITY			PH		
Poylmer	1,060 kg/m³			45 s/l			12		
TIMES									
END CIRCULATING	PIPE STARTED			ON BOTTOM			RIG TO CEMENT		
03:30	09:30			22:15			00:15		
START MIXING CEMENT	END MIXING CEMENT			CALCULATE DISPLACEMENT			WATER AHEAD		
00:25	01:08			32.88			-		
START DISPLACING	END DISPLACING			DISPLACEMENT TIME					
01:10	01:45			35					
PRESSURES									
BREAK CIRCULATION	CIRCULATING		FINAL PRESSURE		BUMP PRESSURE		BUMPED BY		
4,200 kpa	4,400 kpa		8,000 kpa		13,000 kpa		5000		
MAX PUMP PRESSURE	FLOAT HELD		TOP PLUG		BOTTOM PLUG		STRING WEIGHT		
13,000 kpa	Yes		Rubber		None		35 daN		
REMARKS									
Cement w/ Trican. Pump 1m3 Optimum Flush, Pressure test to 34 MPa, Pump 2m3 Optimum Flush at 1160kg/m3 containing 5Kg/m3 Optimum Flush + 36L/m3 MW-2W Mud Wash. Pump 3m3 (1.42t) Scavenger, Titanium 1400-S @ 1300Kg/m3 with 2% OGC-60 + 4% AFA-7. Pump 23.2m3 (14.57t) lead cement Titanium 1400-S @ 1400Kg/m3 with 2% OGC-60 + 4% AFA-7. Pump 17.04m3 tail cement at 1600 kg/m3 (16t) T.A.C.-S with 0.2% AFA-7 + 0.4% TWR-4 + 0.5% Gel + 0.2% TDH-2 + 0.2% CFR-12. Drop plug. Displace w/ 32.86m3 fresh water, Bump plug @ 5 MPa over circulating pressure and hold for 5 minutes. Bleed back & check floats, floats held with 200L back. 9m3 good cement returns to surface. Plug down @ 01:45. Pressure test the casing to 1.4MPa low & 14MPa high for 11min each									



Production Tally

BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

TYPES																															
Item	OD		Drift		Weight		Grade		Range		Thread		Coupl		Cond		Supp		Make		Serial										
P01 Guide Shoe - Re entry guide	0.0 mm		0.0 mm		0.0 kg/m																										
P02 Pup Joint	114.3 mm		0.0 mm		20.1 kg/m																										
P03 Float Collar	114.3 mm		0.0 mm		0.0 kg/m																										
P04 Landing Collar - Wiper Dart Landing collar	114.3 mm		0.0 mm		0.0 kg/m																										
P05 Casing Joint	114.3 mm		99.6 mm		20.1 kg/m		P-110		3		GBCD				New		Trimark		Welded Tube												
P06 Toe Port - Interrra (41.3mpa)	114.3 mm		0.0 mm		20.1 kg/m		P110				BTC								Interrra												
P07 Frac Sleeve - MultiCycle	114.3 mm		0.0 mm		20.1 kg/m		P-110				BTC				New		NCS														
P08 Liner Hanger Assembly - Primaset	114.3 mm		0.0 mm		0.0 kg/m																										
P09 Receptacle - Polish bore receptical	0.0 mm		0.0 mm		0.0 kg/m																										
P10 Other - Setting Tool	0.0 mm		0.0 mm		0.0 kg/m																										
P11 Tail/Drill Pipe	114.3 mm		0.0 mm		24.1 kg/m				2																						
P12 Secondary Float Collar	114.3 mm		0.0 mm		0.0 kg/m																										
TALLY																															
#	#	Typ	Len	I	C	Top	Total	#	#	Typ	Len	I	C	Top	Total	#	#	Typ	Len	I	C	Top	Total	#	#	Typ	Len	I	C	Top	Total
1		P01	0.27	•		4,077.7	0.3	11	2	P05	13.17	•	S	4,042.1	35.9	21		P02	6.75	•		3,973.4	104.6	31		P02	6.55	•		3,893.0	185.0
2		P02	1.85	•		4,075.9	2.1	12		P06	0.55	•		4,041.6	36.4	22	6	P05	13.38	•	S	3,960.0	118.0	32	10	P05	13.22	•	S	3,879.8	198.2
3		P03	0.30	•		4,075.6	2.4	13	3	P05	13.38	•	S	4,028.2	49.8	23	7	P05	12.14	•	S	3,947.8	130.2	33	11	P05	13.37	•	S	3,866.4	211.6
4		P02	1.86	•		4,073.7	4.3	14		P02	6.30	•		4,021.9	56.1	24		P02	6.30	•		3,941.5	136.5	34		P02	6.30	•		3,860.1	217.9
5		P12	0.30	•		4,073.4	4.6	15		P07	1.11	•		4,020.8	57.2	25		P07	1.11	•		3,940.4	137.6	35		P07	1.11	•		3,859.0	219.0
6		P02	1.86	•		4,071.6	6.4	16		P02	6.72	•		4,014.1	63.9	26		P02	6.68	•		3,933.8	144.3	36		P02	6.73	•		3,852.3	225.7
7		P04	0.48	•		4,071.1	6.9	17	4	P05	13.38	•	S	4,000.7	77.3	27	8	P05	13.38	•	S	3,920.4	157.6	37	12	P05	13.37	•	S	3,838.9	239.1
8		P02	1.86	•		4,069.2	8.8	18	5	P05	13.16	•	S	3,987.5	90.5	28	9	P05	13.38	•	S	3,907.0	171.0	38	13	P05	13.23	•	S	3,825.7	252.3
9	1	P05	13.38	•	S	4,055.8	22.2	19		P02	6.30	•		3,981.2	96.8	29		P02	6.30	•		3,900.7	177.3	39		P02	6.30	•		3,819.4	258.6
10		P06	0.55	•		4,055.3	22.7	20		P07	1.11	•		3,980.1	97.9	30		P07	1.11	•		3,899.6	178.4	40		P07	1.11	•		3,818.3	259.7
41		P02	6.65	•		3,811.6	266.4	51		P02	6.74	•		3,730.0	348.0	61		P02	6.69	•		3,649.1	428.9	71		P02	6.63	•		3,567.8	510.2
42	14	P05	13.38	•	S	3,798.3	279.7	52	18	P05	13.22	•	S	3,716.8	361.2	62	22	P05	13.37	•	S	3,635.8	442.3	72	26	P05	13.38	•	S	3,554.4	523.6
43	15	P05	13.37	•	S	3,784.9	293.1	53	19	P05	13.22	•	S	3,703.6	374.4	63	23	P05	13.14	•	S	3,622.6	455.4	73	27	P05	13.06	•	S	3,541.3	536.7
44		P02	6.30	•		3,778.6	299.4	54		P02	6.30	•		3,697.3	380.7	64		P02	6.30	•		3,616.3	461.7	74		P02	6.30	•		3,535.0	543.0
45		P07	1.11	•		3,777.5	300.5	55		P07	1.11	•		3,696.2	381.8	65		P07	1.11	•		3,615.2	462.8	75		P07	1.11	•		3,533.9	544.1
46		P02	6.54	•		3,770.9	307.1	56		P02	6.58	•		3,689.6	388.4	66		P02	6.81	•		3,608.4	469.6	76		P02	6.57	•		3,527.3	550.7
47	16	P05	13.38	•	S	3,757.6	320.4	57	20	P05	13.38	•	S	3,676.2	401.8	67	24	P05	13.22	•	S	3,595.2	482.8	77	28	P05	13.38	•	S	3,514.0	564.0
48	17	P05	13.38	•	S	3,744.2	333.8	58	21	P05	13.00	•	S	3,663.2	414.8	68	25	P05	13.37	•	S	3,581.8	496.2	78	29	P05	13.38	•	S	3,500.6	577.4
49		P02	6.30	•		3,737.9	340.1	59		P02	6.30	•		3,656.9	421.1	69		P02	6.30	•		3,575.5	502.5	79		P02	6.30	•		3,494.3	583.7
50		P07	1.11	•		3,736.8	341.2	60		P07	1.11	•		3,655.8	422.2	70		P07	1.11	•		3,574.4	503.6	80		P07	1.11	•		3,493.2	584.8
81		P02	6.65	•		3,486.5	591.5	91		P02	6.75	•		3,405.3	672.8	101		P02	6.61	•		3,324.3	753.7	111		P02	6.75	•		3,243.0	835.0
82	30	P05	13.37	•	S	3,473.2	604.9	92	34	P05	13.22	•	S	3,392.0	686.0	102	38	P05	13.37	•	S	3,311.0	767.1	112	42	P05	13.38	•	S	3,229.6	848.4
83	31	P05	13.22	•	S	3,459.9	618.1	93	35	P05	13.23	•	S	3,378.8	699.2	103	39	P05	13.37	•	S	3,297.6	780.4	113	43	P05	13.06	•	S	3,216.6	861.4
84		P02	6.30	•		3,453.6	624.4	94		P02	6.30	•		3,372.5	705.5	104		P02	6.30	•		3,291.3	786.7	114		P02	6.30	•		3,210.3	867.7
85		P07	1.11	•		3,452.5	625.5	95		P07	1.11	•		3,371.4	706.6	105		P07	1.11	•		3,290.2	787.8	115		P07	1.11	•		3,209.2	868.8
86		P02	6.50	•		3,446.0	632.0	96		P02	6.75	•		3,364.6	713.4	106		P02	6.51	•		3,283.7	794.3	116		P02	6.62	•		3,202.5	875.5
87	32	P05	13.22	•	S	3,432.8	645.2	97	36	P05	13.26	•	S	3,351.4	726.6	107	40	P05	13.12	•	S	3,270.5	807.5	117	44	P05	13.38	•	S	3,189.2	888.8
88	33	P05	13.39	•	S	3,419.4	658.6	98	37	P05	13.04	•	S	3,338.3	739.7	108	41	P05	13.37	•	S	3,257.2	820.8	118	45	P05	13.22	•	S	3,175.9	902.1
89		P02	6.30	•		3,413.1	664.9	99		P02	6.30	•		3,332.0	746.0	109		P02	6.30	•		3,250.9	827.1	119		P02	6.30	•		3,169.6	908.4
90		P07	1.11	•		3,412.0	666.0	100		P07	1.11	•		3,330.9	747.1	110		P07	1.11	•		3,249.8	828.2	120		P07	1.11	•		3,168.5	909.5
121		P02	6.59	•		3,161.9	916.1	131		P02	6.77	•		3,080.4	997.6	141		P02	6.67	•		2,999.5	1,078.5	151		P02	6.75	•		2,917.9	1,160.2
122	46	P05	13.38	•	S	3,148.6	929.4	132	50	P05	13.23	•	S	3,067.2	1,010.8	142	54	P05	13.38	•	S	2,986.1	1,091.9	152	58	P05	13.38	•	S	2,904.5	1,173.5
123	47	P05	13.38	•	S	3,135.2	942.8	133	51	P05	13.01	•	S	3,054.2	1,023.8	143	55	P05	13.38	•	S	2,972.7	1,105.3	153	59	P05	13.38	•	S	2,891.1	1,186.9
124		P02	6.30	•		3,128.9	949.1	134		P02	6.30	•		3,047.9	1,030.1	144		P02	6.30	•		2,966.4	1,111.6	154		P02	6.30	•		2,884.8	1,193.2
125		P07	1.1																												



Production Tally
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

#	#	Typ	Len	I	C	Top	Total	#	#	Typ	Len	I	C	Top	Total	#	#	Typ	Len	I	C	Top	Total	#	#	Typ	Len	I	C	Top	Total
241		P02	6.53	•		2,188.2	1,889.8	251		P02	6.68	•		2,106.7	1,971.3	261		P02	6.35	•		2,026.1	2,051.9	271		P02	6.76	•		1,944.6	2,133.5
242	94	P05	13.38	•	S	2,174.8	1,903.2	252	98	P05	13.27	•	S	2,093.4	1,984.6	262	102	P05	13.39	•	S	2,012.7	2,065.3	272	106	P05	13.38	•	S	1,931.2	2,146.8
243	95	P05	13.37	•	S	2,161.4	1,916.6	253	99	P05	13.23	•	S	2,080.2	1,997.8	263	103	P05	13.21	•	S	1,999.5	2,078.5	273	107	P05	13.38	•	S	1,917.8	2,160.2
244		P02	6.30	•		2,155.1	1,922.9	254		P02	6.30	•		2,073.9	2,004.1	264		P02	6.30	•		1,993.2	2,084.8	274	108	P05	13.38	•	S	1,904.4	2,173.6
245		P07	1.11	•		2,154.0	1,924.0	255		P07	1.11	•		2,072.8	2,005.2	265		P07	1.11	•		1,992.1	2,085.9	275	109	P05	13.23	•	S	1,891.2	2,186.8
246		P02	6.68	•		2,147.3	1,930.7	256		P02	6.53	•		2,066.3	2,011.7	266		P02	6.60	•		1,985.5	2,092.5	276	110	P05	13.22	•	B	1,878.0	2,200.0
247	96	P05	13.38	•	S	2,133.9	1,944.1	257	100	P05	13.38	•	S	2,052.9	2,025.1	267	104	P05	13.37	•	S	1,972.1	2,105.9	277	111	P05	12.86	•	S	1,865.1	2,212.9
248	97	P05	13.15	•	S	2,120.8	1,957.2	258	101	P05	13.05	•	S	2,039.8	2,038.2	268	105	P05	13.37	•	S	1,958.7	2,119.3	278	112	P05	13.04	•	S	1,852.1	2,225.9
249		P02	6.30	•		2,114.5	1,963.5	259		P02	6.30	•		2,033.5	2,044.5	269		P02	6.30	•		1,952.4	2,125.6	279	113	P05	13.22	•	S	1,838.8	2,239.2
250		P07	1.11	•		2,113.4	1,964.6	260		P07	1.11	•		2,032.4	2,045.6	270		P07	1.11	•		1,951.3	2,126.7	280	114	P05	13.37	•	S	1,825.5	2,252.5
#	#	Typ	Len	I	C	Top	Total	#	#	Typ	Len	I	C	Top	Total	#	#	Typ	Len	I	C	Top	Total	#	#	Typ	Len	I	C	Top	Total
281	115	P05	13.38	•	S	1,812.1	2,265.9	291	125	P05	13.37	•	S	1,680.1	2,398.0	301		P08	1.93	•		1,570.2	2,507.8								
282	116	P05	13.37	•	S	1,798.7	2,279.3	292	126	P05	13.32	•	S	1,666.7	2,411.3	302		P09	3.64	•		1,566.6	2,511.4								
283	117	P05	13.02	•	S	1,785.7	2,292.3	293	127	P05	13.23	•	S	1,653.5	2,424.5	303		P10	2.55	•		1,564.0	2,514.0								
284	118	P05	12.91	•	S	1,772.8	2,305.2	294	128	P05	13.37	•	S	1,640.1	2,437.9																
285	119	P05	13.37	•	S	1,759.4	2,318.6	295	129	P05	13.38	•	S	1,626.8	2,451.3																
286	120	P05	13.00	•	S	1,746.4	2,331.6	296	130	P05	12.99	•	S	1,613.8	2,464.2																
287	121	P05	13.37	•	S	1,733.1	2,345.0	297	131	P05	13.39	•	S	1,600.4	2,477.6																
288	122	P05	13.02	•	S	1,720.0	2,358.0	298	132	P05	13.22	•	S	1,587.2	2,490.9																
289	123	P05	13.23	•	S	1,706.8	2,371.2	299	133	P05	13.15	•	S	1,574.0	2,504.0																
290	124	P05	13.38	•	S	1,693.4	2,384.6	300		P02	1.85	•		1,572.2	2,505.9																

RUN DATE		-
PULLED DATE		-
	#	LENGTH
joints Delivered:	0	0.00 m
joints On Lease	0	0.00 m
joints OUT	0	0.00 m
joints IN	133	1,763.46 m
accessory IN	168	749.94 m
shoe		0.27 m
collar		0.30 m
stick-up		-1,564.03 m
landed at		4,078.00 m

GENERAL & ELEVATIONS									
DATE	KB	GROUND		HOLE DEPTH			HOLE SIZE		
2022-01-29	748 m	742 m		4,076 m			159 mm		
CEMENT TYPES									
AMOUNT	TYPE	COMPANY	VOL	YIELD	EXCESS	EST TOP	RETURNS	DENSITY	
(t)				(m³)	(m³/t)	(%)	(m)	(m³)	(kg/m³)
1.88	Scavenger	Trican		3.00	1.5950	0.00	0.00	3.00	1,400.00
Additives: 0.2% AFA-7 + 0.4% TWR-4 + 0.5% Gel + 0.2% TDH-2 + 0.2% CFR-12									
38.12	T.A.C-S	Trican		40.60	1.0650	60.00	0.00	9.00	1,600.00
Additives: 0.2% AFA-7 + 0.4% TWR-4 + 0.5% Gel + 0.2% TDH-2 + 0.2% CFR-12									
OPERATIONAL DETAILS									
MUD									
TYPE	DENSITY			VISCOSITY			PH		
Polymer	1,070 kg/m³			40 s/l			8		
TIMES									
END CIRCULATING	PIPE STARTED			ON BOTTOM			RIG TO CEMENT		
12:00	02:00			15:00			17:30		
START MIXING CEMENT	END MIXING CEMENT			CALCULATE DISPLACEMENT			WATER AHEAD		
18:58	19:39			29			4		
START DISPLACING	END DISPLACING			DISPLACEMENT TIME					
19:45	20:15			30					
PRESSURES									
BREAK CIRCULATION	CIRCULATING		FINAL PRESSURE		BUMP PRESSURE		BUMPED BY		
4,500 kpa	5,000 kpa		10,000 kpa		17,000 kpa		7000		
MAX PUMP PRESSURE	FLOAT HELD		TOP PLUG		BOTTOM PLUG		STRING WEIGHT		
17,000 kpa	Yes		Rubber		Rubber		45 daN		
REMARKS									
Cement w/ Trican. Pump 1m3 Water, Pressure test to 45 MPa, Pump 2.5m3 Optimum Flush at 1160kg/m3 containing 5Kg/m3 Optimum Flush + 36L/m3 MW-2W Mud Wash. Pump 3m3 (1.88t) Scavenger T.A.C. Bulk Cement w/ 0.2% AFA-7 + 0.4% TWR-4 + 0.5% Gel + 0.2% TDH-2 + 0.2% CFR-12. Pump 40.6m3 cement at 1600 kg/m3 (38.12t) (60% XS) T.A.C.-S with 0.2% AFA-7 + 0.4% TWR-4 + 0.5% Gel + 0.2% TDH-2 + 0.2% CFR-12. Drop plug. Displace w/ 19.5m3 Retarder Water + 9.5m3 Clay/Inhib Water Bump plug @ 7 MPa over circulating pressure and hold for 5 minutes. Bleed back & check floats, floats held with 200L back. Pull out of Liner Hanger & circulate bottoms up. 9m3 good cement returns to surface. Plug down @ 20:20. Pressure test Hanger & Liner to 14MPa high for 11min each									



Tie Back Tally
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

TYPES											
Item	OD	Drift	Weight	Grade	Range	Thread	Coupl	Cond	Supp	Make	Serial
T01 Casing Joint	114.3 mm	96.4 mm	20.1 kg/m	P110	3	BTC					
T02 Receptacle	0.0 mm	0.0 mm	0.0 kg/m								
T03 Other - LATCH	0.0 mm	0.0 mm	0.0 kg/m								
T04 Pup Joint	114.3 mm	96.4 mm	20.1 kg/m	P-110		BTC			Packers Plus		
T05 Other - Tubing hanger	0.0 mm	0.0 mm	0.0 kg/m			LT&C					

TALLY																							
#	#	Typ	Len	I	C	Top	Total	#	#	Typ	Len	I	C	Top	Total	#	#	Typ	Len	I	C	Top	Total
1		T02	3.64	•		1,562.9	3.6	11	9	T01	13.42	•		1,441.1	125.5	21	19	T01	13.42	•		1,307.3	259.2
2		T03	1.30	•		1,561.6	4.9	12	10	T01	13.22	•		1,427.9	138.7	22	20	T01	13.41	•		1,293.9	272.6
3	1	T01	13.40	•		1,548.2	18.3	13	11	T01	13.42	•		1,414.4	152.1	23	21	T01	13.42	•		1,280.5	286.1
4	2	T01	13.42	•		1,534.8	31.8	14	12	T01	13.42	•		1,401.0	165.5	24	22	T01	13.42	•		1,267.1	299.5
5	3	T01	13.42	•		1,521.4	45.2	15	13	T01	13.42	•		1,387.6	179.0	25	23	T01	13.41	•		1,253.7	312.9
6	4	T01	13.42	•		1,508.0	58.6	16	14	T01	13.20	•		1,374.4	192.2	26	24	T01	13.40	•		1,240.3	326.3
7	5	T01	13.43	•		1,494.5	72.0	17	15	T01	13.42	•		1,361.0	205.6	27	25	T01	13.41	•		1,226.9	339.7
8	6	T01	13.19	•		1,481.3	85.2	18	16	T01	13.42	•		1,347.6	219.0	28	26	T01	13.40	•		1,213.5	353.1
9	7	T01	13.41	•		1,467.9	98.6	19	17	T01	13.41	•		1,334.2	232.4	29	27	T01	13.40	•		1,200.1	366.5
10	8	T01	13.42	•		1,454.5	112.1	20	18	T01	13.41	•		1,320.7	245.8	30	28	T01	13.40	•		1,186.7	379.9
#	#	Typ	Len	I	C	Top	Total	#	#	Typ	Len	I	C	Top	Total	#	#	Typ	Len	I	C	Top	Total
41	39	T01	13.42	•		1,039.1	527.5	51	49	T01	13.41	•		905.3	661.3	61	59	T01	13.41	•		771.4	795.2
42	40	T01	13.41	•		1,025.7	540.9	52	50	T01	13.40	•		891.9	674.7	62	60	T01	13.40	•		758.0	808.6
43	41	T01	13.40	•		1,012.3	554.3	53	51	T01	13.40	•		878.5	688.1	63	61	T01	13.17	•		744.8	821.8
44	42	T01	13.42	•		998.9	567.7	54	52	T01	13.41	•		865.1	701.5	64	62	T01	13.42	•		731.4	835.2
45	43	T01	13.39	•		985.5	581.1	55	53	T01	13.41	•		851.6	714.9	65	63	T01	13.40	•		718.0	848.6
46	44	T01	13.21	•		972.3	594.3	56	54	T01	13.40	•		838.2	728.3	66	64	T01	13.12	•		704.8	861.7
47	45	T01	13.40	•		958.9	607.7	57	55	T01	13.40	•		824.8	741.7	67	65	T01	13.40	•		691.4	875.1
48	46	T01	13.40	•		945.5	621.1	58	56	T01	13.40	•		811.4	755.1	68	66	T01	13.39	•		678.1	888.5
49	47	T01	13.40	•		932.1	634.5	59	57	T01	13.28	•		798.2	768.4	69	67	T01	13.40	•		664.7	901.9
50	48	T01	13.40	•		918.7	647.9	60	58	T01	13.40	•		784.8	781.8	70	68	T01	13.33	•		651.3	915.2
#	#	Typ	Len	I	C	Top	Total	#	#	Typ	Len	I	C	Top	Total	#	#	Typ	Len	I	C	Top	Total
81	79	T01	13.19	•		504.4	1,062.1	91	89	T01	13.40	•		370.4	1,196.1	101	99	T01	13.40	•		236.7	1,329.9
82	80	T01	13.40	•		491.0	1,075.5	92	90	T01	13.41	•		357.0	1,209.6	102	100	T01	13.27	•		223.4	1,343.2
83	81	T01	13.40	•		477.6	1,088.9	93	91	T01	13.27	•		343.7	1,222.8	103	101	T01	13.40	•		210.0	1,356.6
84	82	T01	13.40	•		464.2	1,102.3	94	92	T01	13.41	•		330.3	1,236.2	104	102	T01	13.40	•		196.6	1,370.0
85	83	T01	13.38	•		450.9	1,115.7	95	93	T01	13.40	•		316.9	1,249.6	105	103	T01	13.40	•		183.2	1,383.4
86	84	T01	13.41	•		437.4	1,129.1	96	94	T01	13.24	•		303.7	1,262.9	106	104	T01	13.41	•		169.8	1,396.8
87	85	T01	13.41	•		424.0	1,142.5	97	95	T01	13.40	•		290.3	1,276.3	107	105	T01	13.40	•		156.4	1,410.2
88	86	T01	13.40	•		410.6	1,155.9	98	96	T01	13.40	•		276.9	1,289.7	108	106	T01	13.40	•		143.0	1,423.6
89	87	T01	13.41	•		397.2	1,169.3	99	97	T01	13.40	•		263.5	1,303.1	109	107	T01	13.40	•		129.6	1,437.0
90	88	T01	13.41	•		383.8	1,182.7	100	98	T01	13.41	•		250.1	1,316.5	110	108	T01	13.40	•		116.2	1,450.4
#	#	Typ	Len	I	C	Top	Total	#	#	Typ	Len	I	C	Top	Total	#	#	Typ	Len	I	C	Top	Total
121	116	T01	13.39	•		1.2	1,565.4																
122		T04	0.36	•		0.8	1,565.7																
123		T04	0.33	•		0.5	1,566.1																
124		T04	0.33	•		0.2	1,566.4																
125		T05	0.15	•		0.0	1,566.6																

						RUN DATE		2022-01-30			
						PULLED DATE		-			
								#	LENGTH		
						joints Delivered:		122	1,637.58 m		
						joints On Lease		122	1,637.58 m		
						joints OUT		0	0.00 m		
						joints IN		116	1,552.44 m		
						accessory IN		9	14.11 m		
						shoe			-		
						collar			-		
						stick-up			0.00 m		
						landed at			1,566.55 m		



Tie Back and Cement
BLACKSPUR HZ LEDUC-WB 16-11-51-2 • 100/16-11-051-02W5/00 • #0502001

GENERAL & ELEVATIONS				
DATE	KB	GROUND	HOLE DEPTH	HOLE SIZE
	748 m	742 m	-	-
OPERATIONAL DETAILS				
MUD				
TYPE	DENSITY	VISCOSITY	PH	
-			-	
TIMES				
END CIRCULATING	PIPE STARTED	ON BOTTOM	RIG TO CEMENT	
-	-	-	-	
START MIXING CEMENT	END MIXING CEMENT	CALCULATE DISPLACEMENT	WATER AHEAD	
-	-	-	-	
START DISPLACING	END DISPLACING	DISPLACEMENT TIME		
-	-	-		
PRESSURES				
BREAK CIRCULATION	CIRCULATING	FINAL PRESSURE	BUMP PRESSURE	BUMPED BY
MAX PUMP PRESSURE	FLOAT HELD	TOP PLUG	BOTTOM PLUG	- STRING WEIGHT
-	-	-	-	
REMARKS				
No Remarks				



Section 9

Final Directional Surveys



PHOENIX
TECHNOLOGY SERVICES

BLACKSPUR OIL CORP._N83

14-03-051-02W5

BLACKSPUR HZ LEDUC-WB 16-11-51-2

100/16-11-051-02W5/00

Well License: 0502001

Survey: 28333 Final Surveys

Phoenix Technology Survey Report

28 January, 2022

BLACKSPUR OIL CORP. N83

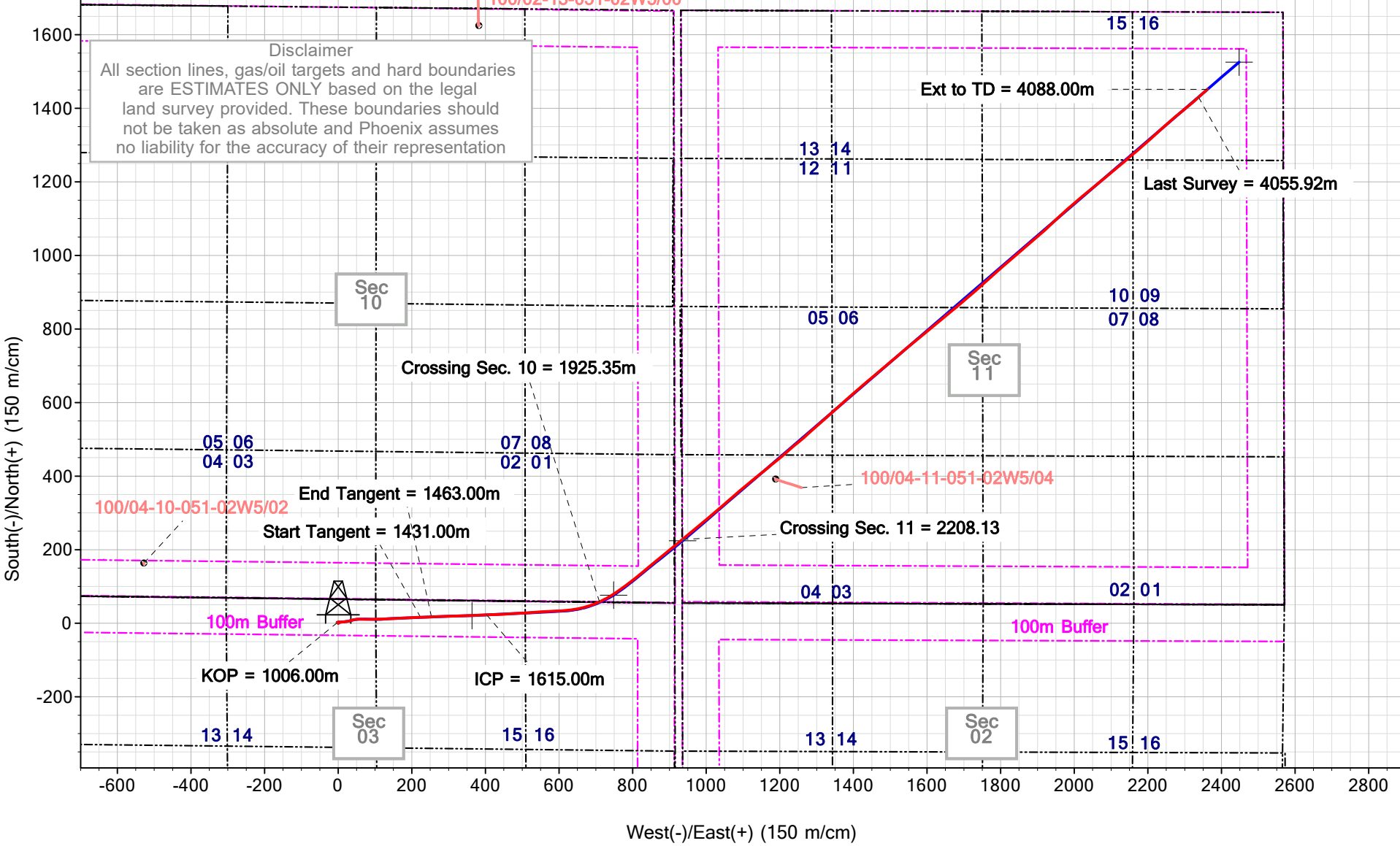
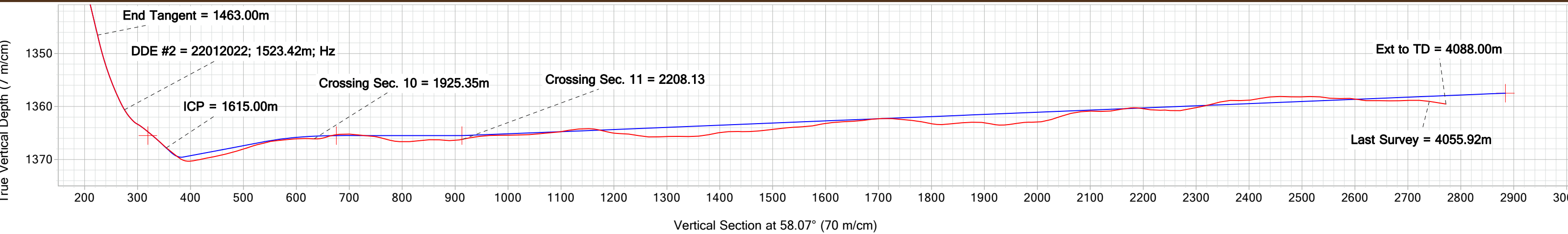
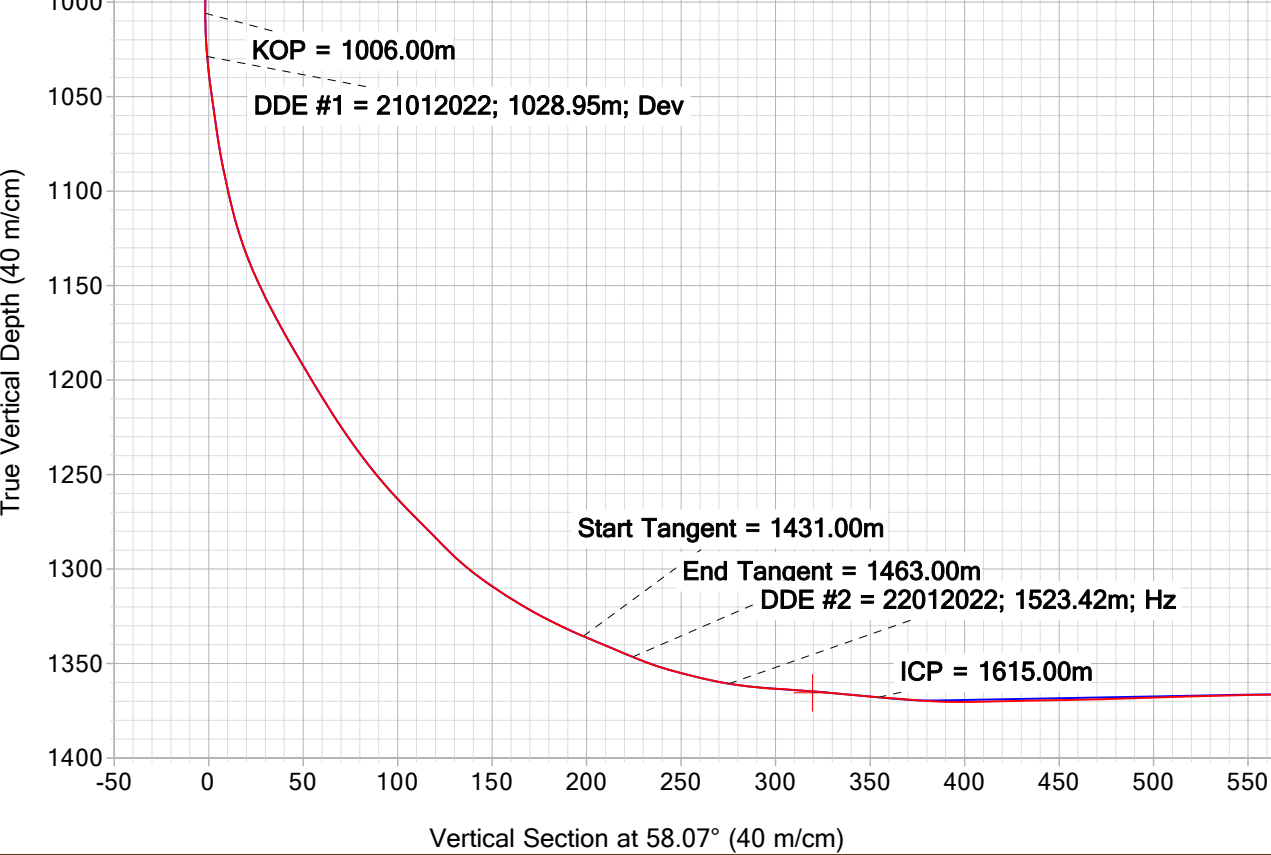
Project: Leduc-WB (NAD 83-Z11)
Site: 14-03-051-02W5
Well: BLACKSPUR HZ LEDUC-WB 16-11-51-2
Wellbore: 100/16-11-051-02W5/00
Design: 28333 Final Surveys
Well License #: 0502001



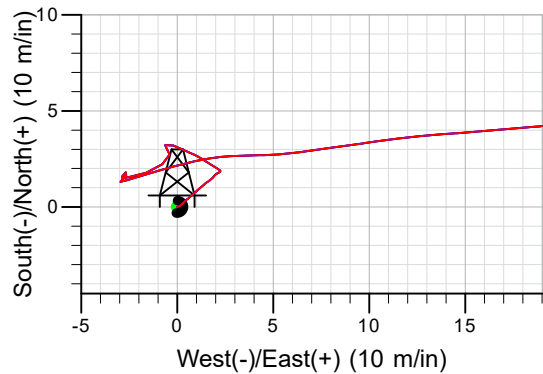
Ground Level (m): 742.01
Actual KB @ 747.51m (Horizon 43)

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSection	Departure	Annotation
5.50	0.00	0.00	5.50	0.00	0.00	0.00	0.00	KB-GL = 5.50m
271.00	1.20	297.90	270.96	2.64	1.05	2.28	4.46	Surf. Csg. = 271.00m
1006.00	0.35	75.97	1005.92	1.30	-2.96	-1.82	11.65	KOP = 1006.00m
1028.95	5.30	72.30	1028.83	1.60	-1.93	-0.79	12.71	DDE #1 = 21012022; 1028.95m; Dev
1431.00	69.54	88.02	1335.54	15.95	223.62	198.22	239.39	Start Tangent = 1431.00m
1463.00	70.37	87.85	1346.55	17.19	253.64	224.36	269.43	End Tangent = 1463.00m
1523.42	81.90	88.70	1360.64	19.45	312.25	275.30	328.09	DDE #2 = 22012022; 1523.42m; Hz
1615.00	85.80	87.60	1367.82	22.65	403.47	354.41	419.37	ICP = 1615.00m
1925.35	89.80	65.60	1366.14	58.24	709.90	633.30	729.60	Crossing Sec. 10 = 1925.35m
2208.13	91.17	50.10	1366.21	227.71	935.36	914.28	1012.35	Crossing Sec. 11 = 2208.13
4055.92	89.10	48.70	1359.06	1430.11	2337.87	2740.50	2860.00	Last Survey = 4055.92m
4088.00	89.10	48.70	1359.57	1451.28	2361.97	2772.15	2892.08	Ext to TD = 4088.00m



SURFACE LOCATION	LOCAL COORDINATES
Datum: North American Datum 1983 Zone: Zone 11N (120 W to 114 W) Northing: 5918259.20 Easting: 685392.50 Latitude: 53° 22' 51.065 N Longitude: 114° 12' 45.341 W	Surface Co-ordinates 65m S of N Boundary 711.4m E of W Boundary, Sec 3



Database:	Compass 5000 Canada	Local Co-ordinate Reference:	Well BLACKSPUR HZ LEDUC-WB 16-11-51-2
Company:	BLACKSPUR OIL CORP._N83	TVD Reference:	Actual KB @ 747.51m (Horizon 43)
Project:	Leduc-WB (NAD 83-Z11)	MD Reference:	Actual KB @ 747.51m (Horizon 43)
Site:	14-03-051-02W5	North Reference:	True
Well:	BLACKSPUR HZ LEDUC-WB 16-11-51-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	100/16-11-051-02W5/00	Well License	0502001
Design:	28333 Final Surveys		

Project	Leduc-WB (NAD 83-Z11)		
Map System:	Universal Transverse Mercator	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Zone 11N (120 W to 114 W)		

Site	14-03-051-02W5			
Site Position:		Northing:	5,918,259.20 m	Latitude: 53.38
From:	Map	Easting:	685,392.50 m	Longitude: -114.21
Position Uncertainty:	0.00 m	Slot Radius:	335.28 mm	Grid Convergence: 2.24 °

Well	BLACKSPUR HZ LEDUC-WB 16-11-51-2			
Well Position	+N/-S	0.00 m	Northing:	5,918,259.20 m
	+E/-W	0.00 m	Easting:	685,392.50 m
Position Uncertainty		0.00 m	Wellhead Elevation:	m
			Ground Level:	742.01 m

Wellbore	100/16-11-051-02W5/00				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	MVHD	1/15/2022	13.68	74.72	56,340.70214604

Design	28333 Final Surveys			
Audit Notes:	0502001			
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (m)	+N/-S (m)	+E/-W (m)	Direction (°)
	0.00	0.00	0.00	58.07

Survey Program	Date	1/28/2022		
From (m)	To (m)	Survey (Wellbore)	Tool Name	Description
0.00	4,088.00	28333 Final Surveys (100/16-11-051-02W5)	MWD+HDGM	OWSG Rev.2 MWD + HDGM

Survey										
Measured Depth (m)	Inclination (°)	Azimuth (°)	Vertical Depth (m)	Subsea Depth (m)	+N/-S (m)	+E/-W (m)	Vertical Section (m)	Dogleg Rate (°/30m)	Build Rate (°/30m)	Turn Rate (°/30m)
0.00	0.00	0.00	0.00	747.51	0.00	0.00	0.00	0.000	0.000	0.000
KB-GL = 5.50m										
5.50	0.00	0.00	5.50	742.01	0.00	0.00	0.00	0.000	0.000	0.000
36.32	0.40	72.60	36.32	711.19	0.03	0.10	0.10	0.389	0.389	0.000
58.62	1.00	42.50	58.62	688.89	0.20	0.31	0.37	0.920	0.807	-40.493
77.95	1.20	52.00	77.94	669.57	0.45	0.58	0.73	0.419	0.310	14.744
96.80	1.50	47.50	96.79	650.72	0.74	0.92	1.17	0.506	0.477	-7.162
115.68	1.80	48.90	115.66	631.85	1.10	1.32	1.71	0.481	0.477	2.225
134.56	1.00	58.10	134.54	612.97	1.38	1.69	2.16	1.316	-1.271	14.619

Database:	Compass 5000 Canada	Local Co-ordinate Reference:	Well BLACKSPUR HZ LEDUC-WB 16-11-51-2
Company:	BLACKSPUR OIL CORP._N83	TVD Reference:	Actual KB @ 747.51m (Horizon 43)
Project:	Leduc-WB (NAD 83-Z11)	MD Reference:	Actual KB @ 747.51m (Horizon 43)
Site:	14-03-051-02W5	North Reference:	True
Well:	BLACKSPUR HZ LEDUC-WB 16-11-51-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	100/16-11-051-02W5/00	Well License	0502001
Design:	28333 Final Surveys		

Survey											
Measured Depth (m)	Inclination (°)	Azimuth (°)	Vertical Depth (m)	Subsea Depth (m)	+N/-S (m)	+E/-W (m)	Vertical Section (m)	Dogleg Rate (°/30m)	Build Rate (°/30m)	Turn Rate (°/30m)	
153.68	0.90	34.70	153.65	593.86	1.59	1.92	2.47	0.624	-0.157	-36.715	
172.60	0.90	67.80	172.57	574.94	1.77	2.14	2.75	0.813	0.000	52.484	
191.58	0.40	333.70	191.55	555.96	1.89	2.25	2.90	1.597	-0.790	-148.736	
210.62	0.80	294.30	210.59	536.92	2.00	2.10	2.84	0.871	0.630	-62.080	
229.59	1.30	304.30	229.56	517.95	2.18	1.80	2.68	0.839	0.791	15.814	
248.50	1.20	301.50	248.46	499.05	2.40	1.45	2.50	0.186	-0.159	-4.442	
254.00	1.20	302.40	253.96	493.55	2.46	1.35	2.45	0.103	0.000	4.909	
Surf. Csg. = 271.00m											
271.00	1.20	297.90	270.96	476.55	2.64	1.05	2.28	0.166	0.000	-7.941	
288.40	1.20	293.30	288.35	459.16	2.80	0.72	2.09	0.166	0.000	-7.931	
345.42	0.80	293.40	345.36	402.15	3.19	-0.20	1.52	0.210	-0.210	0.053	
402.33	0.30	207.10	402.27	345.24	3.22	-0.63	1.17	0.441	-0.264	-45.493	
459.25	0.30	101.80	459.19	288.32	3.05	-0.55	1.15	0.251	0.000	-55.499	
516.39	0.60	178.40	516.33	231.18	2.72	-0.40	1.10	0.318	0.158	40.217	
573.24	0.90	241.20	573.18	174.33	2.21	-0.78	0.51	0.434	0.158	33.140	
630.06	1.00	243.40	629.99	117.52	1.77	-1.61	-0.43	0.056	0.053	1.162	
687.16	0.70	274.00	687.08	60.43	1.58	-2.41	-1.21	0.280	-0.158	16.077	
744.19	0.30	220.20	744.11	3.40	1.49	-2.85	-1.63	0.303	-0.210	-28.301	
801.31	0.50	21.50	801.23	-53.72	1.60	-2.86	-1.58	0.415	0.105	84.716	
858.15	0.20	107.90	858.07	-110.56	1.80	-2.67	-1.31	0.278	-0.158	45.602	
915.15	0.30	214.20	915.07	-167.56	1.65	-2.66	-1.39	0.213	0.053	55.947	
971.98	0.40	226.30	971.90	-224.39	1.39	-2.89	-1.72	0.065	0.053	6.387	
990.96	0.10	159.60	990.88	-243.37	1.33	-2.93	-1.78	0.588	-0.474	-105.427	
1,000.54	0.40	247.10	1,000.46	-252.95	1.31	-2.96	-1.82	1.278	0.939	274.008	
KOP = 1006.00m											
1,006.00	0.35	75.97	1,005.92	-258.41	1.30	-2.96	-1.82	4.109	-0.275	-940.275	
1,009.99	0.90	73.10	1,009.91	-262.40	1.32	-2.92	-1.78	4.141	4.135	-21.579	
1,019.47	3.10	75.88	1,019.38	-271.87	1.40	-2.60	-1.46	6.967	6.962	8.797	
DDE #1 = 21012022; 1028.95m; Dev											
1,028.95	5.30	72.30	1,028.83	-281.32	1.60	-1.93	-0.79	7.008	6.962	-11.329	
1,038.53	6.80	73.90	1,038.36	-290.85	1.89	-0.96	0.18	4.726	4.697	5.010	
1,048.01	8.00	75.50	1,047.76	-300.25	2.21	0.21	1.35	3.853	3.797	5.063	
1,057.44	8.70	79.80	1,057.09	-309.58	2.50	1.55	2.64	2.983	2.227	13.680	
1,066.91	9.50	88.10	1,066.44	-318.93	2.65	3.04	3.98	4.864	2.534	26.294	
1,076.53	10.60	88.30	1,075.91	-328.40	2.70	4.71	5.43	3.432	3.430	0.624	
1,086.19	12.00	81.70	1,085.39	-337.88	2.88	6.60	7.12	5.912	4.348	-20.497	
1,095.70	13.50	82.30	1,094.66	-347.15	3.17	8.68	9.04	4.750	4.732	1.893	
1,105.16	14.60	81.80	1,103.84	-356.33	3.49	10.95	11.14	3.510	3.488	-1.586	
1,114.65	16.20	85.80	1,112.99	-365.48	3.75	13.45	13.40	6.068	5.058	12.645	
1,124.19	19.50	85.20	1,122.07	-374.56	3.98	16.37	16.00	10.393	10.377	-1.887	
1,133.70	22.00	85.10	1,130.96	-383.45	4.27	19.73	19.00	7.887	7.886	-0.315	
1,143.20	24.50	80.20	1,139.69	-392.18	4.76	23.44	22.41	9.976	7.895	-15.474	
1,152.83	26.20	76.40	1,148.39	-400.88	5.60	27.47	26.28	7.328	5.296	-11.838	

Database:	Compass 5000 Canada	Local Co-ordinate Reference:	Well BLACKSPUR HZ LEDUC-WB 16-11-51-2
Company:	BLACKSPUR OIL CORP._N83	TVD Reference:	Actual KB @ 747.51m (Horizon 43)
Project:	Leduc-WB (NAD 83-Z11)	MD Reference:	Actual KB @ 747.51m (Horizon 43)
Site:	14-03-051-02W5	North Reference:	True
Well:	BLACKSPUR HZ LEDUC-WB 16-11-51-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	100/16-11-051-02W5/00	Well License	0502001
Design:	28333 Final Surveys		

Survey										
Measured Depth (m)	Inclination (°)	Azimuth (°)	Vertical Depth (m)	Subsea Depth (m)	+N/-S (m)	+E/-W (m)	Vertical Section (m)	Dogleg Rate (°/30m)	Build Rate (°/30m)	Turn Rate (°/30m)
1,162.35	27.40	75.80	1,156.89	-409.38	6.63	31.64	30.36	3.876	3.782	-1.891
1,171.82	28.60	74.70	1,165.25	-417.74	7.76	35.94	34.61	4.138	3.801	-3.485
1,181.30	30.00	76.90	1,173.52	-426.01	8.90	40.44	39.02	5.588	4.430	6.962
1,190.77	31.90	78.50	1,181.64	-434.13	9.93	45.20	43.61	6.559	6.019	5.069
1,200.25	33.20	82.30	1,189.63	-442.12	10.78	50.22	48.33	7.666	4.114	12.025
1,209.70	34.30	87.10	1,197.49	-449.98	11.26	55.45	53.01	9.155	3.492	15.238
1,219.26	35.70	91.30	1,205.32	-457.81	11.33	60.93	57.70	8.741	4.393	13.180
1,228.73	37.20	92.60	1,212.94	-465.43	11.14	66.55	62.37	5.345	4.752	4.118
1,238.23	38.20	91.80	1,220.46	-472.95	10.92	72.35	67.18	3.515	3.158	-2.526
1,247.72	39.50	91.80	1,227.85	-480.34	10.73	78.30	72.13	4.110	4.110	0.000
1,257.30	40.80	92.60	1,235.17	-487.66	10.49	84.48	77.25	4.380	4.071	2.505
1,266.78	42.70	90.60	1,242.24	-494.73	10.32	90.79	82.51	7.342	6.013	-6.329
1,276.27	43.40	89.00	1,249.18	-501.67	10.34	97.26	88.02	4.101	2.213	-5.058
1,285.75	44.90	87.10	1,255.98	-508.47	10.57	103.86	93.74	6.330	4.747	-6.013
1,295.22	46.60	87.10	1,262.59	-515.08	10.91	110.64	99.67	5.385	5.385	0.000
1,304.87	48.50	87.40	1,269.10	-521.59	11.25	117.75	105.89	5.947	5.907	0.933
1,314.34	48.00	87.00	1,275.41	-527.90	11.60	124.81	112.06	1.845	-1.584	-1.267
1,324.00	48.50	87.10	1,281.84	-534.33	11.97	132.00	118.36	1.570	1.553	0.311
1,333.45	49.10	87.00	1,288.06	-540.55	12.33	139.10	124.58	1.920	1.905	-0.317
1,342.94	50.80	86.80	1,294.17	-546.66	12.73	146.36	130.95	5.396	5.374	-0.632
1,352.54	54.00	86.60	1,300.03	-552.52	13.17	153.95	137.62	10.012	10.000	-0.625
1,362.01	57.80	86.90	1,305.33	-557.82	13.61	161.78	144.50	12.064	12.038	0.950
1,371.60	60.00	87.30	1,310.29	-562.78	14.03	169.98	151.68	6.965	6.882	1.251
1,381.16	61.20	88.20	1,314.98	-567.47	14.35	178.30	158.92	4.498	3.766	2.824
1,390.65	62.50	88.00	1,319.46	-571.95	14.63	186.66	166.16	4.147	4.110	-0.632
1,400.13	65.00	88.10	1,323.65	-576.14	14.92	195.16	173.52	7.916	7.911	0.316
1,409.61	66.60	87.60	1,327.54	-580.03	15.24	203.80	181.03	5.265	5.063	-1.582
1,419.06	67.70	88.00	1,331.21	-583.70	15.58	212.50	188.59	3.683	3.492	1.270
1,428.52	69.30	88.20	1,334.67	-587.16	15.87	221.30	196.21	5.108	5.074	0.634
Start Tangent = 1431.00m										
1,431.00	69.54	88.02	1,335.54	-588.03	15.95	223.62	198.22	3.547	2.903	-2.177
1,437.98	70.20	87.50	1,337.95	-590.44	16.20	230.17	203.91	3.528	2.837	-2.235
1,447.41	69.80	87.70	1,341.17	-593.66	16.57	239.02	211.62	1.406	-1.273	0.636
1,456.90	69.60	87.40	1,344.46	-596.95	16.95	247.91	219.37	1.091	-0.632	-0.948
End Tangent = 1463.00m										
1,463.00	70.37	87.85	1,346.55	-599.04	17.19	253.64	224.36	4.320	3.787	2.213
1,466.34	70.80	88.10	1,347.66	-600.15	17.30	256.79	227.09	4.405	3.862	2.246
1,475.84	73.40	87.30	1,350.58	-603.07	17.67	265.82	234.95	8.555	8.211	-2.526
1,485.33	75.50	87.40	1,353.13	-605.62	18.09	274.95	242.92	6.646	6.639	0.316
1,494.99	77.30	87.80	1,355.40	-607.89	18.48	284.33	251.09	5.719	5.590	1.242
1,504.47	78.60	87.60	1,357.38	-609.87	18.85	293.60	259.15	4.160	4.114	-0.633
1,513.92	79.90	88.20	1,359.14	-611.63	19.19	302.87	267.20	4.531	4.127	1.905
DDE #2 = 22012022; 1523.42m; Hz										

Database:	Compass 5000 Canada	Local Co-ordinate Reference:	Well BLACKSPUR HZ LEDUC-WB 16-11-51-2
Company:	BLACKSPUR OIL CORP._N83	TVD Reference:	Actual KB @ 747.51m (Horizon 43)
Project:	Leduc-WB (NAD 83-Z11)	MD Reference:	Actual KB @ 747.51m (Horizon 43)
Site:	14-03-051-02W5	North Reference:	True
Well:	BLACKSPUR HZ LEDUC-WB 16-11-51-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	100/16-11-051-02W5/00	Well License	0502001
Design:	28333 Final Surveys		

Survey										
Measured Depth (m)	Inclination (°)	Azimuth (°)	Vertical Depth (m)	Subsea Depth (m)	+N/-S (m)	+E/-W (m)	Vertical Section (m)	Dogleg Rate (°/30m)	Build Rate (°/30m)	Turn Rate (°/30m)
1,523.42	81.90	88.70	1,360.64	-613.13	19.45	312.25	275.30	6.505	6.316	1.579
1,532.90	83.70	88.80	1,361.83	-614.32	19.65	321.65	283.38	5.705	5.696	0.316
1,542.47	85.30	89.00	1,362.75	-615.24	19.83	331.18	291.56	5.054	5.016	0.627
1,552.00	87.40	88.60	1,363.35	-615.84	20.03	340.68	299.74	6.729	6.611	-1.259
1,561.72	86.20	87.90	1,363.90	-616.39	20.33	350.39	308.13	4.286	-3.704	-2.160
1,571.24	86.10	87.70	1,364.53	-617.02	20.69	359.88	316.38	0.703	-0.315	-0.630
1,580.70	85.80	87.40	1,365.20	-617.69	21.10	369.30	324.59	1.344	-0.951	-0.951
1,590.17	85.70	87.50	1,365.90	-618.39	21.52	378.74	332.82	0.447	-0.317	0.317
1,599.00	85.40	87.20	1,366.59	-619.08	21.93	387.53	340.50	1.439	-1.019	-1.019
ICP = 1615.00m										
1,615.00	85.80	87.60	1,367.82	-620.31	22.65	403.47	354.41	1.059	0.750	0.750
1,625.00	86.06	87.86	1,368.53	-621.02	23.04	413.44	363.08	1.102	0.780	0.780
1,630.43	86.20	88.00	1,368.89	-621.38	23.24	418.85	367.77	1.093	0.773	0.773
1,640.03	86.00	87.30	1,369.55	-622.04	23.63	428.42	376.10	2.270	-0.625	-2.187
1,648.00	87.36	87.13	1,370.01	-622.50	24.02	436.37	383.05	5.159	5.119	-0.640
1,649.43	87.60	87.10	1,370.07	-622.56	24.09	437.79	384.30	5.074	5.035	-0.629
1,659.03	89.20	87.40	1,370.34	-622.83	24.55	447.38	392.68	5.087	5.000	0.937
1,668.49	90.90	87.50	1,370.33	-622.82	24.97	456.83	400.92	5.400	5.391	0.317
1,677.99	90.80	87.20	1,370.19	-622.68	25.41	466.32	409.21	0.999	-0.316	-0.947
1,687.48	91.00	86.60	1,370.04	-622.53	25.92	475.79	417.52	1.999	0.632	-1.897
1,697.08	91.20	86.80	1,369.86	-622.35	26.48	485.37	425.95	0.884	0.625	0.625
1,706.58	90.80	86.70	1,369.69	-622.18	27.02	494.86	434.28	1.302	-1.263	-0.316
1,725.19	91.19	86.11	1,369.37	-621.86	28.18	513.43	450.66	1.140	0.629	-0.951
1,725.56	91.20	86.10	1,369.36	-621.85	28.21	513.80	450.98	1.147	0.811	-0.811
1,744.49	91.10	85.30	1,368.98	-621.47	29.63	532.67	467.75	1.277	-0.158	-1.268
1,763.49	91.60	86.80	1,368.53	-621.02	30.93	551.62	484.53	2.496	0.789	2.368
1,782.44	91.60	86.70	1,368.00	-620.49	32.01	570.53	501.15	0.158	0.000	-0.158
1,801.51	91.60	86.90	1,367.47	-619.96	33.07	589.56	517.86	0.315	0.000	0.315
1,811.00	91.10	86.60	1,367.25	-619.74	33.61	599.04	526.18	1.843	-1.581	-0.948
1,820.46	91.30	86.80	1,367.05	-619.54	34.16	608.48	534.49	0.897	0.634	0.634
1,830.04	91.40	85.30	1,366.82	-619.31	34.82	618.03	542.94	4.706	0.313	-4.697
1,839.54	91.10	83.70	1,366.62	-619.11	35.73	627.49	551.45	5.139	-0.947	-5.053
1,849.19	90.40	82.00	1,366.49	-618.98	36.93	637.06	560.21	5.715	-2.176	-5.285
1,858.68	90.50	80.00	1,366.42	-618.90	38.41	646.43	568.95	6.330	0.316	-6.322
1,868.18	90.70	77.70	1,366.32	-618.81	40.25	655.75	577.83	7.290	0.632	-7.263
1,877.69	90.40	76.10	1,366.22	-618.71	42.40	665.01	586.83	5.135	-0.946	-5.047
1,887.16	90.50	73.40	1,366.15	-618.64	44.89	674.15	595.90	8.559	0.317	-8.553
1,896.65	90.10	71.70	1,366.10	-618.59	47.74	683.20	605.09	5.521	-1.264	-5.374
1,906.32	90.20	69.40	1,366.07	-618.56	50.96	692.32	614.53	7.142	0.310	-7.135
1,915.77	89.60	67.50	1,366.09	-618.58	54.43	701.11	623.82	6.325	-1.905	-6.032
Crossing Sec. 10 = 1925.35m										
1,925.35	89.80	65.60	1,366.14	-618.63	58.24	709.90	633.30	5.983	0.626	-5.950
1,934.94	90.50	63.90	1,366.12	-618.61	62.33	718.57	642.82	5.751	2.190	-5.318

Database:	Compass 5000 Canada	Local Co-ordinate Reference:	Well BLACKSPUR HZ LEDUC-WB 16-11-51-2
Company:	BLACKSPUR OIL CORP._N83	TVD Reference:	Actual KB @ 747.51m (Horizon 43)
Project:	Leduc-WB (NAD 83-Z11)	MD Reference:	Actual KB @ 747.51m (Horizon 43)
Site:	14-03-051-02W5	North Reference:	True
Well:	BLACKSPUR HZ LEDUC-WB 16-11-51-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	100/16-11-051-02W5/00	Well License	0502001
Design:	28333 Final Surveys		

Survey										
Measured Depth (m)	Inclination (°)	Azimuth (°)	Vertical Depth (m)	Subsea Depth (m)	+N/-S (m)	+E/-W (m)	Vertical Section (m)	Dogleg Rate (°/30m)	Build Rate (°/30m)	Turn Rate (°/30m)
1,944.34	91.80	62.00	1,365.93	-618.42	66.61	726.94	652.19	7.346	4.149	-6.064
1,951.51	91.73	60.51	1,365.71	-618.20	70.05	733.22	659.34	6.238	-0.293	-6.234
1,953.98	91.70	60.00	1,365.63	-618.12	71.28	735.37	661.81	6.202	-0.364	-6.194
1,963.65	91.00	57.90	1,365.41	-617.90	76.26	743.65	671.48	6.866	-2.172	-6.515
1,968.57	90.74	57.23	1,365.33	-617.82	78.90	747.80	676.39	4.382	-1.585	-4.085
1,973.13	90.50	56.60	1,365.28	-617.77	81.39	751.62	680.95	4.435	-1.579	-4.145
1,992.34	89.80	54.00	1,365.23	-617.72	92.33	767.41	700.14	4.205	-1.093	-4.060
2,011.43	89.10	53.90	1,365.41	-617.90	103.56	782.85	719.18	1.111	-1.100	-0.157
2,030.49	89.80	52.20	1,365.60	-618.09	115.02	798.08	738.16	2.894	1.102	-2.676
2,049.59	88.60	50.90	1,365.86	-618.35	126.89	813.03	757.14	2.779	-1.885	-2.042
2,068.76	88.40	50.00	1,366.37	-618.86	139.09	827.81	776.13	1.442	-0.313	-1.408
2,087.82	89.90	50.20	1,366.65	-619.14	151.32	842.43	795.00	2.382	2.361	0.315
2,106.78	90.10	49.50	1,366.65	-619.14	163.54	856.92	813.77	1.152	0.316	-1.108
2,125.72	90.90	51.20	1,366.48	-618.97	175.63	871.50	832.54	2.976	1.267	2.693
2,144.66	90.20	51.20	1,366.30	-618.79	187.49	886.26	851.34	1.109	-1.109	0.000
2,163.82	89.70	50.70	1,366.32	-618.81	199.57	901.14	870.35	1.107	-0.783	-0.783
2,182.88	89.50	50.80	1,366.45	-618.94	211.62	915.90	889.26	0.352	-0.315	0.157
2,201.87	91.20	50.20	1,366.33	-618.82	223.70	930.55	908.08	2.848	2.686	-0.948
Crossing Sec. 11 = 2208.13										
2,208.13	91.17	50.10	1,366.21	-618.70	227.71	935.36	914.28	0.494	-0.156	-0.468
2,221.09	91.10	49.90	1,365.95	-618.44	236.04	945.29	927.11	0.494	-0.156	-0.468
2,240.14	90.70	50.50	1,365.65	-618.14	248.23	959.92	945.98	1.136	-0.630	0.945
2,259.13	90.20	50.40	1,365.50	-617.99	260.33	974.56	964.80	0.806	-0.790	-0.158
2,278.18	90.00	50.20	1,365.47	-617.96	272.49	989.22	983.67	0.445	-0.315	-0.315
2,297.15	90.20	50.20	1,365.43	-617.92	284.64	1,003.79	1,002.46	0.316	0.316	0.000
2,316.22	90.10	49.60	1,365.38	-617.87	296.92	1,018.38	1,021.34	0.957	-0.157	-0.944
2,335.11	90.20	49.30	1,365.34	-617.83	309.20	1,032.73	1,040.02	0.502	0.159	-0.476
2,354.15	90.80	48.60	1,365.17	-617.66	321.70	1,047.09	1,058.81	1.453	0.945	-1.103
2,373.12	90.20	49.30	1,365.00	-617.49	334.16	1,061.40	1,077.54	1.458	-0.949	1.107
2,392.01	90.80	49.20	1,364.84	-617.33	346.49	1,075.71	1,096.21	0.966	0.953	-0.159
2,411.06	91.20	49.30	1,364.51	-617.00	358.92	1,090.14	1,115.03	0.649	0.630	0.157
2,430.03	90.20	49.90	1,364.27	-616.76	371.22	1,104.58	1,133.79	1.844	-1.581	0.949
2,449.13	90.10	51.20	1,364.22	-616.71	383.35	1,119.33	1,152.73	2.048	-0.157	2.042
2,467.98	88.70	50.80	1,364.42	-616.91	395.22	1,133.98	1,171.43	2.317	-2.228	-0.637
2,487.10	88.60	50.60	1,364.87	-617.36	407.32	1,148.77	1,190.39	0.351	-0.157	-0.314
2,506.21	89.90	50.70	1,365.12	-617.61	419.44	1,163.54	1,209.34	2.047	2.041	0.157
2,525.18	89.40	50.80	1,365.24	-617.73	431.44	1,178.23	1,228.15	0.806	-0.791	0.158
2,544.19	88.80	51.00	1,365.54	-618.03	443.43	1,192.99	1,247.01	0.998	-0.947	0.316
2,563.14	89.80	49.80	1,365.77	-618.26	455.51	1,207.58	1,265.79	2.473	1.583	-1.900
2,582.26	90.30	49.00	1,365.75	-618.24	467.95	1,222.10	1,284.69	1.480	0.785	-1.255
2,601.41	90.20	49.60	1,365.67	-618.16	480.44	1,236.62	1,303.62	0.953	-0.157	0.940
2,620.51	89.90	50.00	1,365.65	-618.14	492.76	1,251.21	1,322.52	0.785	-0.471	0.628

Database:	Compass 5000 Canada	Local Co-ordinate Reference:	Well BLACKSPUR HZ LEDUC-WB 16-11-51-2
Company:	BLACKSPUR OIL CORP._N83	TVD Reference:	Actual KB @ 747.51m (Horizon 43)
Project:	Leduc-WB (NAD 83-Z11)	MD Reference:	Actual KB @ 747.51m (Horizon 43)
Site:	14-03-051-02W5	North Reference:	True
Well:	BLACKSPUR HZ LEDUC-WB 16-11-51-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	100/16-11-051-02W5/00	Well License	0502001
Design:	28333 Final Surveys		

Survey										
Measured Depth (m)	Inclination (°)	Azimuth (°)	Vertical Depth (m)	Subsea Depth (m)	+N/-S (m)	+E/-W (m)	Vertical Section (m)	Dogleg Rate (°/30m)	Build Rate (°/30m)	Turn Rate (°/30m)
2,639.57	89.90	49.00	1,365.68	-618.17	505.14	1,265.70	1,341.36	1.574	0.000	-1.574
2,658.70	90.50	47.80	1,365.62	-618.11	517.84	1,280.01	1,360.22	2.104	0.941	-1.882
2,677.63	91.10	48.10	1,365.35	-617.84	530.52	1,294.06	1,378.85	1.063	0.951	0.475
2,696.54	91.20	48.70	1,364.97	-617.46	543.07	1,308.20	1,397.49	0.965	0.159	0.952
2,715.60	90.00	47.90	1,364.77	-617.26	555.75	1,322.43	1,416.27	2.270	-1.889	-1.259
2,734.54	90.20	48.40	1,364.74	-617.23	568.39	1,336.54	1,434.93	0.853	0.317	0.792
2,753.47	89.80	48.50	1,364.74	-617.23	580.94	1,350.70	1,453.59	0.653	-0.634	0.158
2,772.44	90.70	48.40	1,364.66	-617.15	593.53	1,364.90	1,472.30	1.432	1.423	-0.158
2,791.58	90.50	48.50	1,364.46	-616.95	606.22	1,379.22	1,491.17	0.350	-0.313	0.157
2,810.66	90.90	48.60	1,364.23	-616.72	618.85	1,393.52	1,509.98	0.648	0.629	0.157
2,829.75	90.20	48.50	1,364.04	-616.53	631.49	1,407.83	1,528.81	1.111	-1.100	-0.157
2,848.70	90.70	49.20	1,363.89	-616.38	643.95	1,422.10	1,547.51	1.362	0.792	1.108
2,858.17	89.90	49.00	1,363.84	-616.33	650.16	1,429.26	1,556.87	2.612	-2.534	-0.634
2,877.02	91.10	50.00	1,363.68	-616.17	662.40	1,443.59	1,575.50	2.486	1.910	1.592
2,895.88	91.10	50.30	1,363.32	-615.81	674.48	1,458.07	1,594.18	0.477	0.000	0.477
2,914.76	90.50	49.90	1,363.05	-615.54	686.59	1,472.55	1,612.88	1.146	-0.953	-0.636
2,933.88	90.40	49.70	1,362.90	-615.39	698.93	1,487.15	1,631.80	0.351	-0.157	-0.314
2,952.80	90.10	49.60	1,362.82	-615.31	711.18	1,501.57	1,650.51	0.501	-0.476	-0.159
2,971.78	90.80	49.50	1,362.67	-615.16	723.49	1,516.02	1,669.28	1.118	1.106	-0.158
2,990.82	90.70	50.00	1,362.42	-614.91	735.79	1,530.55	1,688.12	0.803	-0.158	0.788
3,009.79	90.10	50.20	1,362.29	-614.78	747.96	1,545.10	1,706.91	1.000	-0.949	0.316
3,028.75	89.70	50.10	1,362.32	-614.81	760.11	1,559.65	1,725.69	0.652	-0.633	-0.158
3,047.71	89.40	50.40	1,362.47	-614.96	772.23	1,574.23	1,744.47	0.671	-0.475	0.475
3,066.65	89.50	51.30	1,362.65	-615.14	784.19	1,588.92	1,763.26	1.434	0.158	1.426
3,085.61	88.90	50.90	1,362.92	-615.41	796.10	1,603.67	1,782.08	1.141	-0.949	-0.633
3,104.61	88.90	49.90	1,363.28	-615.77	808.20	1,618.31	1,800.90	1.579	0.000	-1.579
3,123.54	90.20	50.10	1,363.43	-615.92	820.37	1,632.81	1,819.64	2.084	2.060	0.317
3,142.54	90.70	50.30	1,363.28	-615.77	832.53	1,647.41	1,838.46	0.850	0.789	0.316
3,161.57	90.40	50.20	1,363.10	-615.59	844.70	1,662.04	1,857.32	0.499	-0.473	-0.158
3,180.56	90.30	50.40	1,362.98	-615.47	856.83	1,676.65	1,876.13	0.353	-0.158	0.316
3,199.67	89.40	50.10	1,363.03	-615.52	869.05	1,691.34	1,895.06	1.489	-1.413	-0.471
3,218.55	88.80	49.50	1,363.33	-615.82	881.24	1,705.76	1,913.74	1.348	-0.953	-0.953
3,237.47	90.00	48.80	1,363.53	-616.02	893.61	1,720.07	1,932.43	2.203	1.903	-1.110
3,256.45	91.00	48.60	1,363.36	-615.85	906.14	1,734.33	1,951.16	1.612	1.581	-0.316
3,275.45	90.70	48.40	1,363.08	-615.57	918.72	1,748.56	1,969.89	0.569	-0.474	-0.316
3,294.39	89.90	48.50	1,362.98	-615.47	931.29	1,762.73	1,988.57	1.277	-1.267	0.158
3,313.56	90.60	47.90	1,362.90	-615.39	944.06	1,777.02	2,007.45	1.443	1.095	-0.939
3,332.55	91.80	47.90	1,362.50	-614.99	956.79	1,791.11	2,026.14	1.896	1.896	0.000
3,351.53	92.00	48.90	1,361.87	-614.36	969.39	1,805.29	2,044.84	1.611	0.316	1.581
3,370.46	91.30	49.00	1,361.33	-613.82	981.81	1,819.56	2,063.52	1.121	-1.109	0.158
3,389.36	90.60	49.10	1,361.01	-613.50	994.20	1,833.83	2,082.18	1.122	-1.111	0.159
3,408.38	90.10	49.20	1,360.90	-613.39	1,006.64	1,848.22	2,100.97	0.804	-0.789	0.158
3,427.28	89.60	49.30	1,360.95	-613.44	1,018.98	1,862.54	2,119.65	0.809	-0.794	0.159

Database:	Compass 5000 Canada				Local Co-ordinate Reference:			Well BLACKSPUR HZ LEDUC-WB 16-11-51-2		
Company:	BLACKSPUR OIL CORP._N83				TVD Reference:			Actual KB @ 747.51m (Horizon 43)		
Project:	Leduc-WB (NAD 83-Z11)				MD Reference:			Actual KB @ 747.51m (Horizon 43)		
Site:	14-03-051-02W5				North Reference:			True		
Well:	BLACKSPUR HZ LEDUC-WB 16-11-51-2				Survey Calculation Method:			Minimum Curvature		
Wellbore:	100/16-11-051-02W5/00				Well License			0502001		
Design:	28333 Final Surveys									
Survey										
Measured Depth (m)	Inclination (°)	Azimuth (°)	Vertical Depth (m)	Subsea Depth (m)	+N/-S (m)	+E/-W (m)	Vertical Section (m)	Dogleg Rate (°/30m)	Build Rate (°/30m)	Turn Rate (°/30m)
3,446.26	90.80	49.40	1,360.88	-613.37	1,031.34	1,876.94	2,138.41	1.903	1.897	0.158
3,465.20	91.10	49.50	1,360.57	-613.06	1,043.65	1,891.33	2,157.13	0.501	0.475	0.158
3,484.13	90.50	49.30	1,360.30	-612.79	1,055.97	1,905.70	2,175.85	1.002	-0.951	-0.317
3,503.31	89.20	47.70	1,360.35	-612.84	1,068.68	1,920.06	2,194.76	3.224	-2.033	-2.503
3,522.30	89.00	46.20	1,360.65	-613.14	1,081.64	1,933.94	2,213.39	2.390	-0.316	-2.370
3,541.25	90.50	47.10	1,360.73	-613.22	1,094.65	1,947.72	2,231.96	2.769	2.375	1.425
3,560.51	89.20	46.90	1,360.78	-613.27	1,107.78	1,961.80	2,250.86	2.049	-2.025	-0.312
3,579.79	90.70	48.10	1,360.80	-613.29	1,120.81	1,976.02	2,269.81	2.989	2.334	1.867
3,598.97	91.40	49.10	1,360.45	-612.94	1,133.49	1,990.40	2,288.73	1.909	1.095	1.564
3,617.99	90.80	49.40	1,360.08	-612.57	1,145.90	2,004.81	2,307.52	1.058	-0.946	0.473
3,637.17	91.70	50.10	1,359.66	-612.15	1,158.29	2,019.44	2,326.49	1.783	1.408	1.095
3,656.33	91.30	50.60	1,359.16	-611.65	1,170.51	2,034.19	2,345.47	1.002	-0.626	0.783
3,675.45	90.40	50.60	1,358.88	-611.37	1,182.65	2,048.96	2,364.43	1.412	-1.412	0.000
3,694.58	89.50	50.40	1,358.90	-611.39	1,194.81	2,063.72	2,383.39	1.446	-1.411	-0.314
3,713.56	91.00	51.00	1,358.81	-611.30	1,206.84	2,078.41	2,402.21	2.554	2.371	0.948
3,732.62	90.90	50.20	1,358.50	-610.99	1,218.93	2,093.14	2,421.11	1.269	-0.157	-1.259
3,751.58	90.70	50.00	1,358.23	-610.72	1,231.09	2,107.68	2,439.88	0.448	-0.316	-0.316
3,770.57	89.90	49.50	1,358.13	-610.62	1,243.36	2,122.18	2,458.67	1.490	-1.264	-0.790
3,789.54	89.80	49.50	1,358.18	-610.67	1,255.68	2,136.60	2,477.43	0.158	-0.158	0.000
3,808.54	90.10	49.00	1,358.20	-610.69	1,268.08	2,150.99	2,496.21	0.921	0.474	-0.789
3,827.62	90.20	50.20	1,358.15	-610.64	1,280.45	2,165.52	2,515.08	1.893	0.157	1.887
3,846.78	89.50	49.30	1,358.20	-610.69	1,292.83	2,180.15	2,534.04	1.785	-1.096	-1.409
3,865.75	89.00	49.00	1,358.45	-610.94	1,305.24	2,194.49	2,552.78	0.922	-0.791	-0.474
3,884.91	90.50	47.80	1,358.53	-611.02	1,317.96	2,208.82	2,571.66	3.008	2.349	-1.879
3,903.99	89.70	47.60	1,358.50	-610.99	1,330.80	2,222.93	2,590.43	1.297	-1.258	-0.314
3,923.03	88.80	47.20	1,358.75	-611.24	1,343.68	2,236.95	2,609.14	1.552	-1.418	-0.630
3,942.01	90.20	48.90	1,358.91	-611.40	1,356.37	2,251.06	2,627.83	3.481	2.213	2.687
3,960.95	89.80	49.70	1,358.91	-611.40	1,368.72	2,265.42	2,646.55	1.417	-0.634	1.267
3,979.92	90.00	50.60	1,358.95	-611.44	1,380.88	2,279.98	2,665.33	1.458	0.316	1.423
3,998.98	90.10	50.50	1,358.93	-611.42	1,392.99	2,294.70	2,684.23	0.223	0.157	-0.157
4,018.04	90.30	49.80	1,358.86	-611.35	1,405.20	2,309.34	2,703.11	1.146	0.315	-1.102
4,036.96	89.70	48.50	1,358.86	-611.35	1,417.58	2,323.65	2,721.80	2.270	-0.951	-2.061
Last Survey = 4055.92m										
4,055.92	89.10	48.70	1,359.06	-611.55	1,430.11	2,337.87	2,740.50	1.001	-0.949	0.316
Ext to TD = 4088.00m										
4,088.00	89.10	48.70	1,359.57	-612.06	1,451.28	2,361.97	2,772.15	0.000	0.000	0.000

Database:	Compass 5000 Canada	Local Co-ordinate Reference:	Well BLACKSPUR HZ LEDUC-WB 16-11-51-2
Company:	BLACKSPUR OIL CORP._N83	TVD Reference:	Actual KB @ 747.51m (Horizon 43)
Project:	Leduc-WB (NAD 83-Z11)	MD Reference:	Actual KB @ 747.51m (Horizon 43)
Site:	14-03-051-02W5	North Reference:	True
Well:	BLACKSPUR HZ LEDUC-WB 16-11-51-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	100/16-11-051-02W5/00	Well License	0502001
Design:	28333 Final Surveys		

Survey Annotations				
Measured Depth ()	Vertical Depth ()	Local Coordinates +N/-S () +E/-W ()		Comment
5.50	5.50	0.00	0.00	KB-GL = 5.50m
271.00	270.96	2.64	1.05	Surf. Csg. = 271.00m
1,006.00	1,005.92	1.30	-2.96	KOP = 1006.00m
1,028.95	1,028.83	1.60	-1.93	DDE #1 = 21012022; 1028.95m; Dev
1,431.00	1,335.54	15.95	223.62	Start Tangent = 1431.00m
1,463.00	1,346.55	17.19	253.64	End Tangent = 1463.00m
1,523.42	1,360.64	19.45	312.25	DDE #2 = 22012022; 1523.42m; Hz
1,615.00	1,367.82	22.65	403.47	ICP = 1615.00m
1,925.35	1,366.14	58.24	709.90	Crossing Sec. 10 = 1925.35m
2,208.13	1,366.21	227.71	935.36	Crossing Sec. 11 = 2208.13
4,055.92	1,359.06	1,430.11	2,337.87	Last Survey = 4055.92m
4,088.00	1,359.57	1,451.28	2,361.97	Ext to TD = 4088.00m

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------



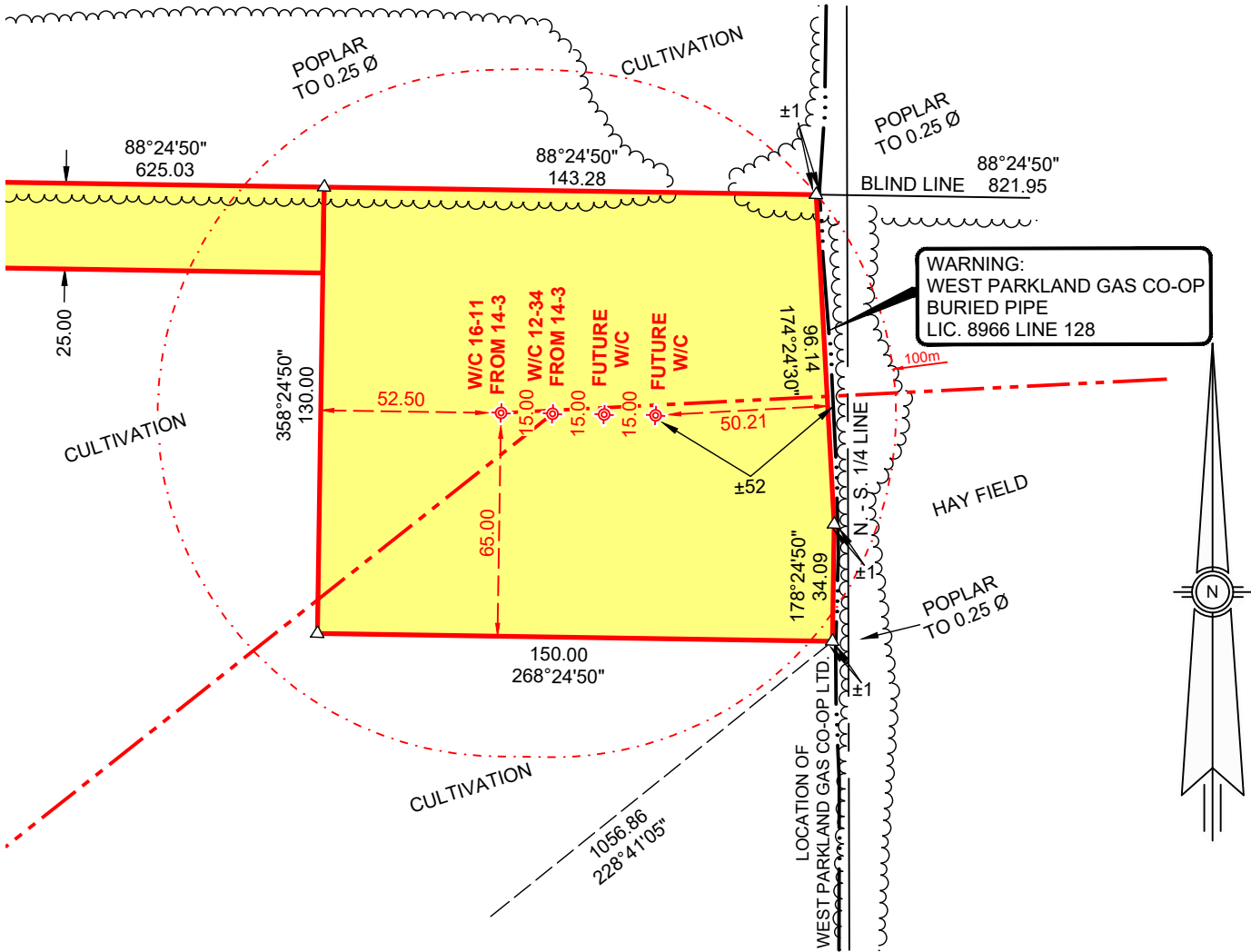
Section 10

As-Drilled Survey

BURIED FACILITIES INFORMATION

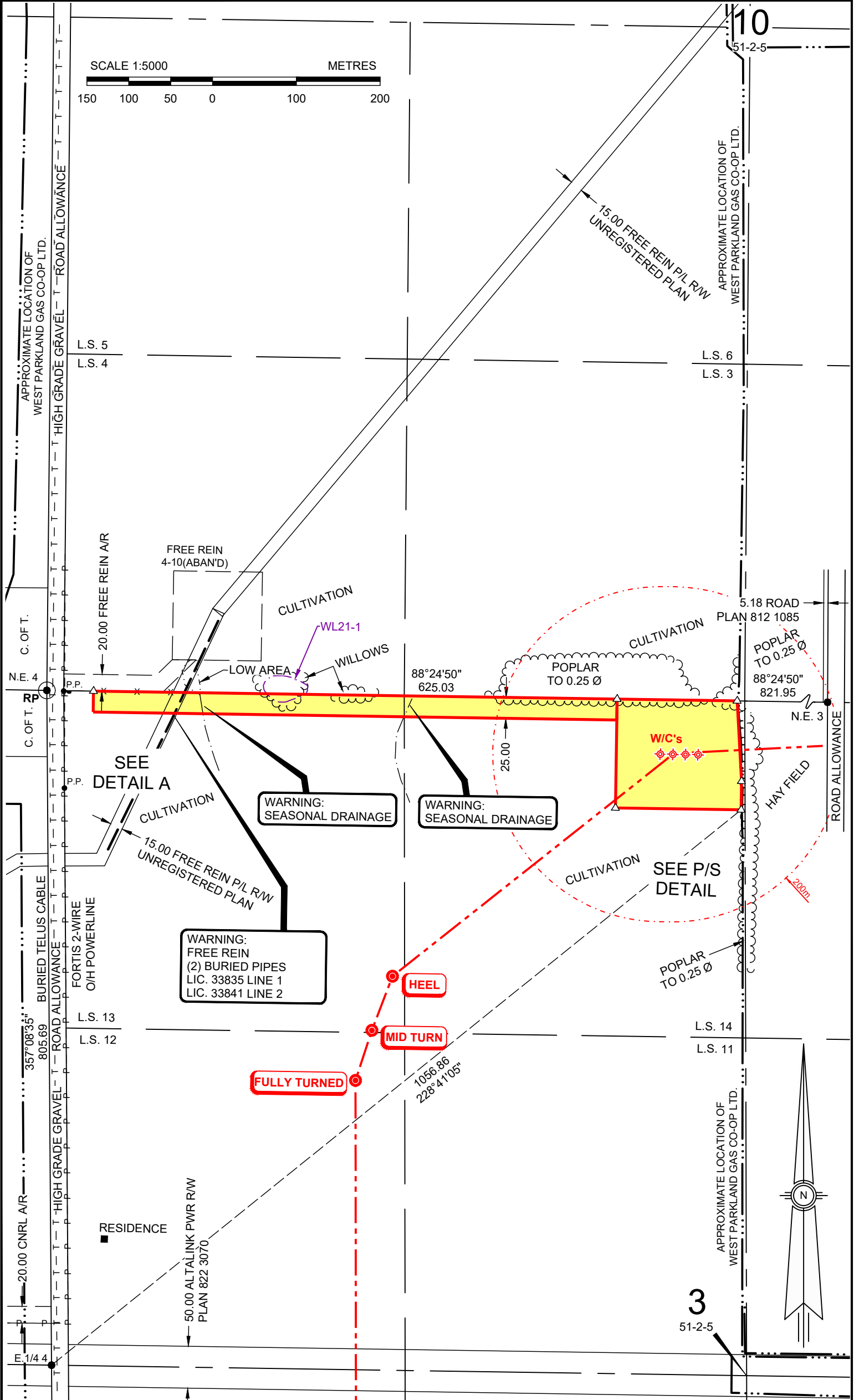
Due to the limitations of the electronic devices used to locate underground facilities, it should not be assumed that the locations and/or depths shown on this plan of survey are exact or that all underground facilities are shown. Caltech Surveys and any of its employees take no responsibility for the accuracy of the underground facilities shown and all underground facilities should be located by the respective authorities prior to construction.

CONTACT ALBERTA ONE-CALL PRIOR TO CONSTRUCTION: PHONE 1-800-242-3447



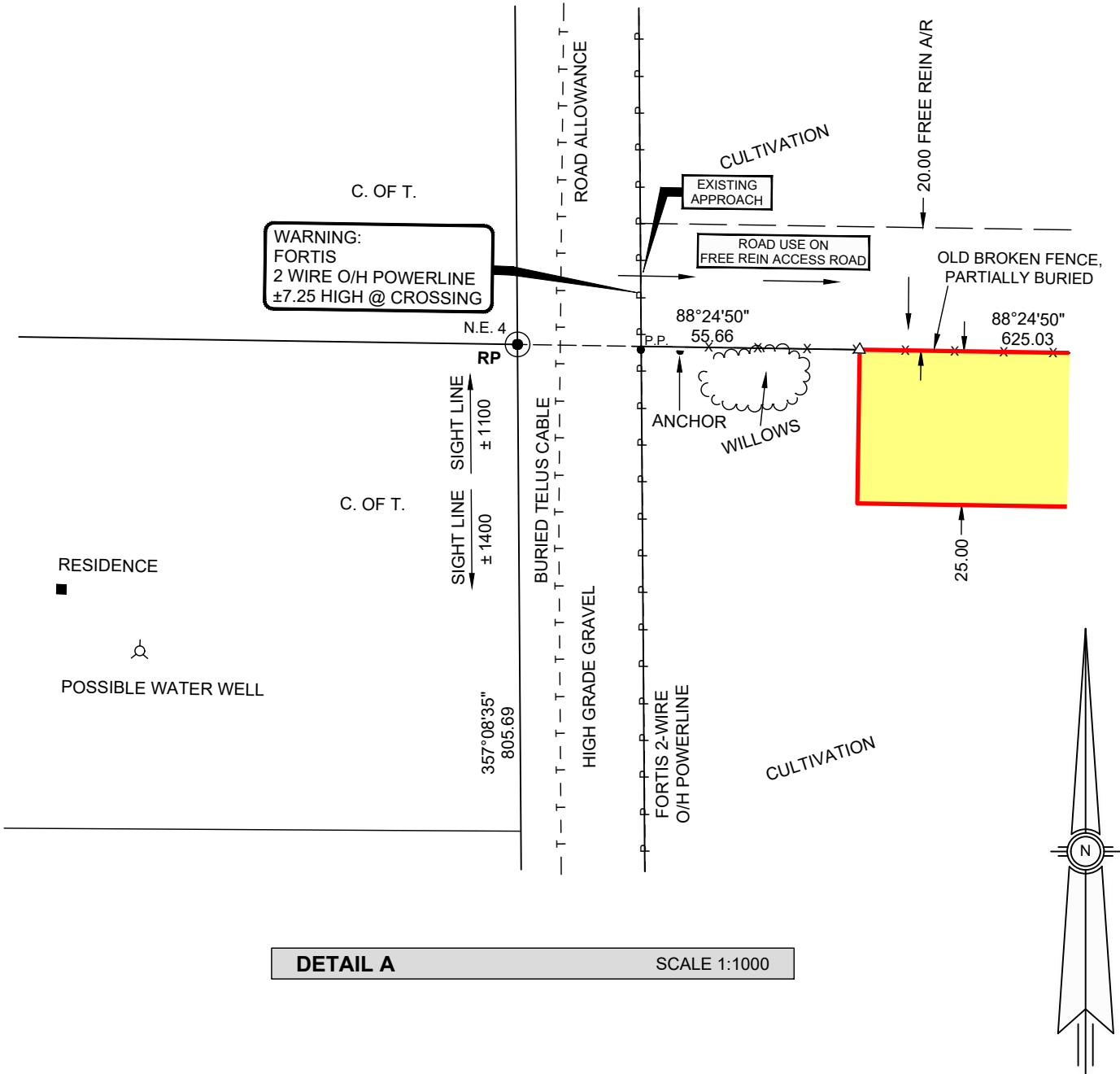
PAD SITE DETAIL SCALE 1:2000

ABBREVIATIONS		LEGEND	
ac..... Acres	N..... North	Portions referred to shown thus:.....	
ABAN'D..... Abandoned	O/H..... Overhead	Portions for workspace shown thus:.....	
A/R..... Access road	Pl..... Placed	Statutory Iron posts shown thus:.....	Found
A/G..... Above ground	P/L..... Pipeline	Survey marks (spikes) shown thus:.....	Placed
Calc..... Calculated	Pit..... 4 pits	Iron bar shown thus:.....	
C.S..... Countersunk	PWR..... Powerline	Temporary points shown thus:.....	
C. of T..... Certificate of title	Ref..... Reference	Proposed well centres shown thus:.....	
E..... East	Rge..... Range	Proposed Start/End of HZ & Bottom Holes, Way Points (WP),	
Fd..... Found	Re-est..... Re-establishment	Landing & Target Entry points shown thus:.....	
F/L..... Flow line	Res..... Restored	Proposed drilling locations shown thus.....	
ha..... Hectare	R/W..... Right of way	Existing well locations shown thus:.....	
HWY..... Highway	S..... South	Abandoned wells shown thus:.....	
HZ..... Horizontal drill	Sec..... Section	Existing end HZ / Bottom Holes shown thus:.....	
I..... Iron post	THEOR..... Theoretical	Water well shown thus.....	
I.Bar..... Iron bar	Twp..... Township	Buried pipe shown thus:.....	
L.S..... Legal subdivision	UTL..... Utility	Buried gas co-op pipe shown thus:.....	
M..... Mound or Meridian	U/G..... Under ground	Buried power cable shown thus:.....	
Mp..... Marker post	W..... West	Buried Telus cable shown thus:.....	
Mkd..... Marked	Wit..... Witness	Overhead powerline shown thus:.....	
Mk..... Mark	W/C..... Well centre	Power pole shown thus:.....	
Mon..... Monument	W/H..... Well head	Fence shown thus:.....	
		Road shown thus:.....	
		Tree line shown thus:.....	
		Wetland supplied data provided by Ecoventure shown thus.....	

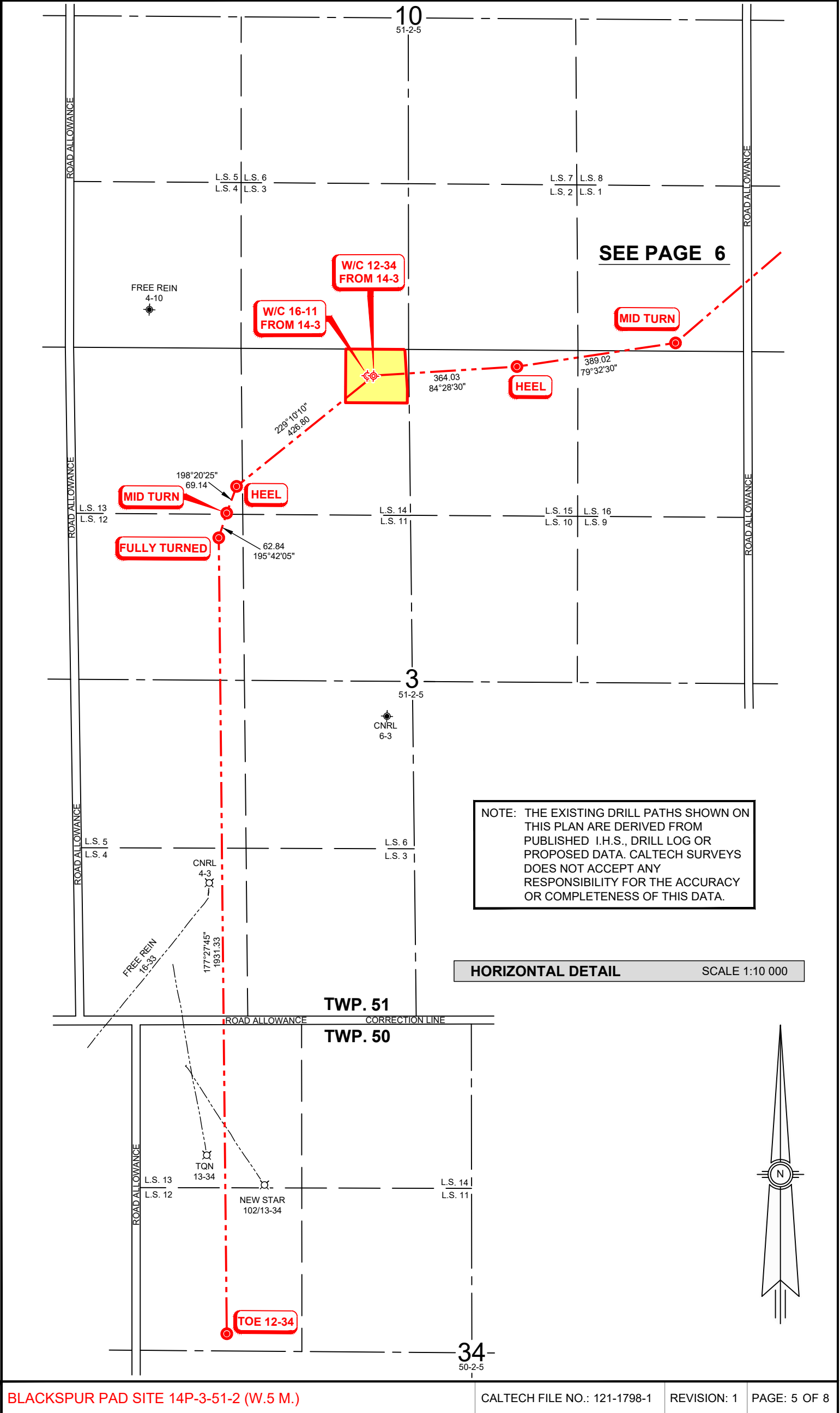


BLACKSPUR HZ TELFORD 12-34-50-2					GROUND ELEVATION : 742.4	
COORDINATES	LOCAL	GEOGRAPHIC NAD83	GEOGRAPHIC NAD27	UTM (ZONE 11) NAD83	UTM (ZONE 11) NAD27	
SURFACE	65.0 S. of N. } BDY. 726.4 E. of W. } SEC.3	LAT : 53.380850° LONG : -114.212370°	LAT : 53.380785° LONG : -114.211336°	5 918 259.6 N. 685 407.5 E.	5 918 038.2 N. 685 483.0 E.	
HEEL	335.0 S. of N. } BDY. 390.0 E. of W. } SEC.3	LAT : 53.378458° LONG : -114.217382°	LAT : 53.378393° LONG : -114.216348°	5 917 980.6 N. 685 084.6 E.	5 917 759.1 N. 685 160.1 E.	
MID TURN	400.0 S. of N. } BDY. 365.0 E. of W. } SEC.3	LAT : 53.377877° LONG : -114.217747°	LAT : 53.377812° LONG : -114.216713°	5 917 915.0 N. 685 062.8 E.	5 917 693.5 N. 685 138.3 E.	
FULLY TURNED	460.0 S. of N. } BDY. 345.0 E. of W. } SEC.3	LAT : 53.377340° LONG : -114.218038°	LAT : 53.377275° LONG : -114.217004°	5 917 854.5 N. 685 045.8 E.	5 917 633.0 N. 685 121.3 E.	
TOE	750.0 S. of N. } BDY. 210.0 E. of W. } SEC.34	LAT : 53.359988° LONG : -114.217884°	LAT : 53.359924° LONG : -114.216850°	5 915 925.3 N. 685 131.3 E.	5 915 703.8 N. 685 206.8 E.	

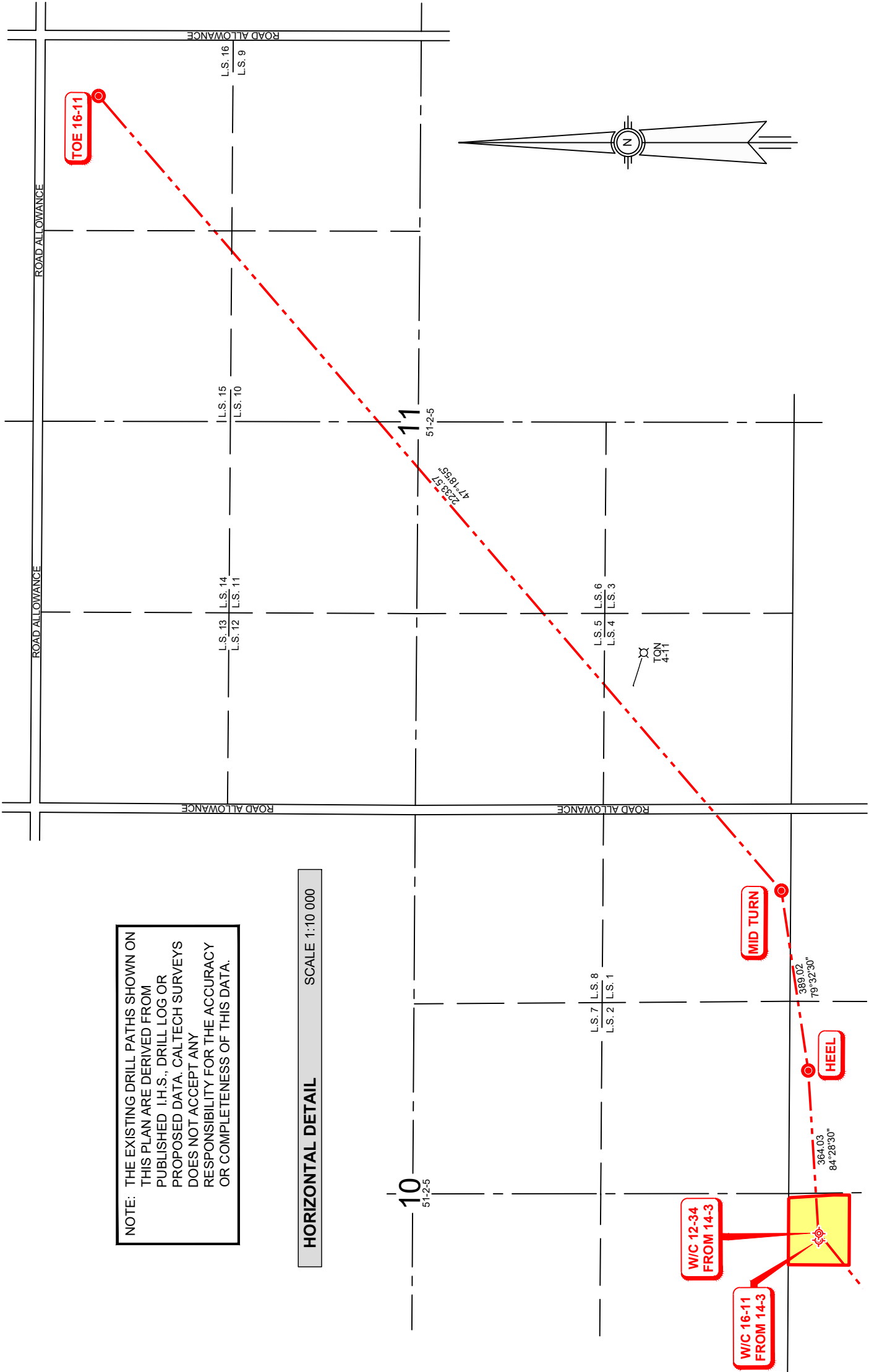
BLACKSPUR HZ LEDUC-WB 16-11-51-2					GROUND ELEVATION : 742.3	
COORDINATES	LOCAL	GEOGRAPHIC NAD83	GEOGRAPHIC NAD27	UTM (ZONE 11) NAD83	UTM (ZONE 11) NAD27	
SURFACE	65.0 S. of N. } BDY. 711.4 E. of W. } SEC.3	LAT : 53.380852° LONG : -114.212595°	LAT : 53.380787° LONG : -114.211562°	5 918 259.2 N. 685 392.5 E.	5 918 037.7 N. 685 468.0 E.	
HEEL	40.0 S. of N. } BDY. 550.0 W. of E. } SEC.3	LAT : 53.381039° LONG : -114.207134°	LAT : 53.380974° LONG : -114.206101°	5 918 294.3 N. 685 754.8 E.	5 918 072.8 N. 685 830.3 E.	
MID TURN	20.0 N. of S. } BDY. 165.0 W. of E. } SEC.10	LAT : 53.381538° LONG : -114.201349°	LAT : 53.381473° LONG : -114.200316°	5 918 364.9 N. 686 137.3 E.	5 918 143.4 N. 686 212.8 E.	
TOE	135.0 S. of N. } BDY. 120.0 W. of E. } SEC.11	LAT : 53.394551° LONG : -114.175798°	LAT : 53.394486° LONG : -114.174765°	5 919 879.0 N. 687 779.0 E.	5 919 657.6 N. 687 854.5 E.	



DETAIL A SCALE 1:1000

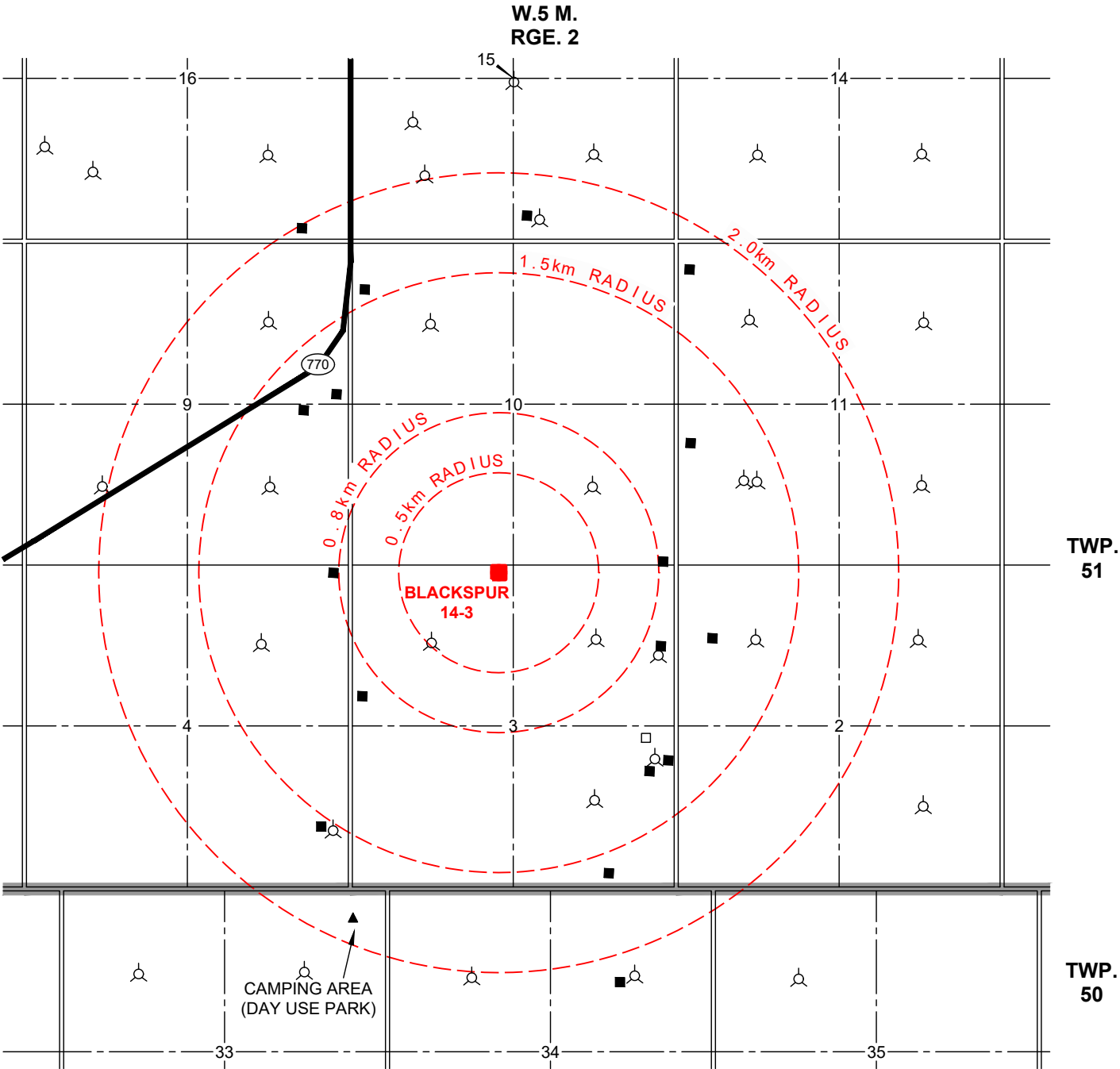


SEE PAGE 5



HORIZONTAL DETAIL SCALE 1:10 000

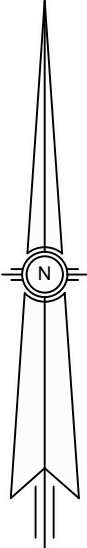
BLACKSPUR 14-3-51-2 (W.5 M.)



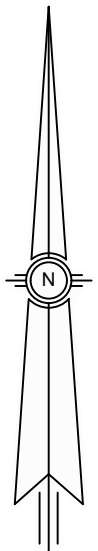
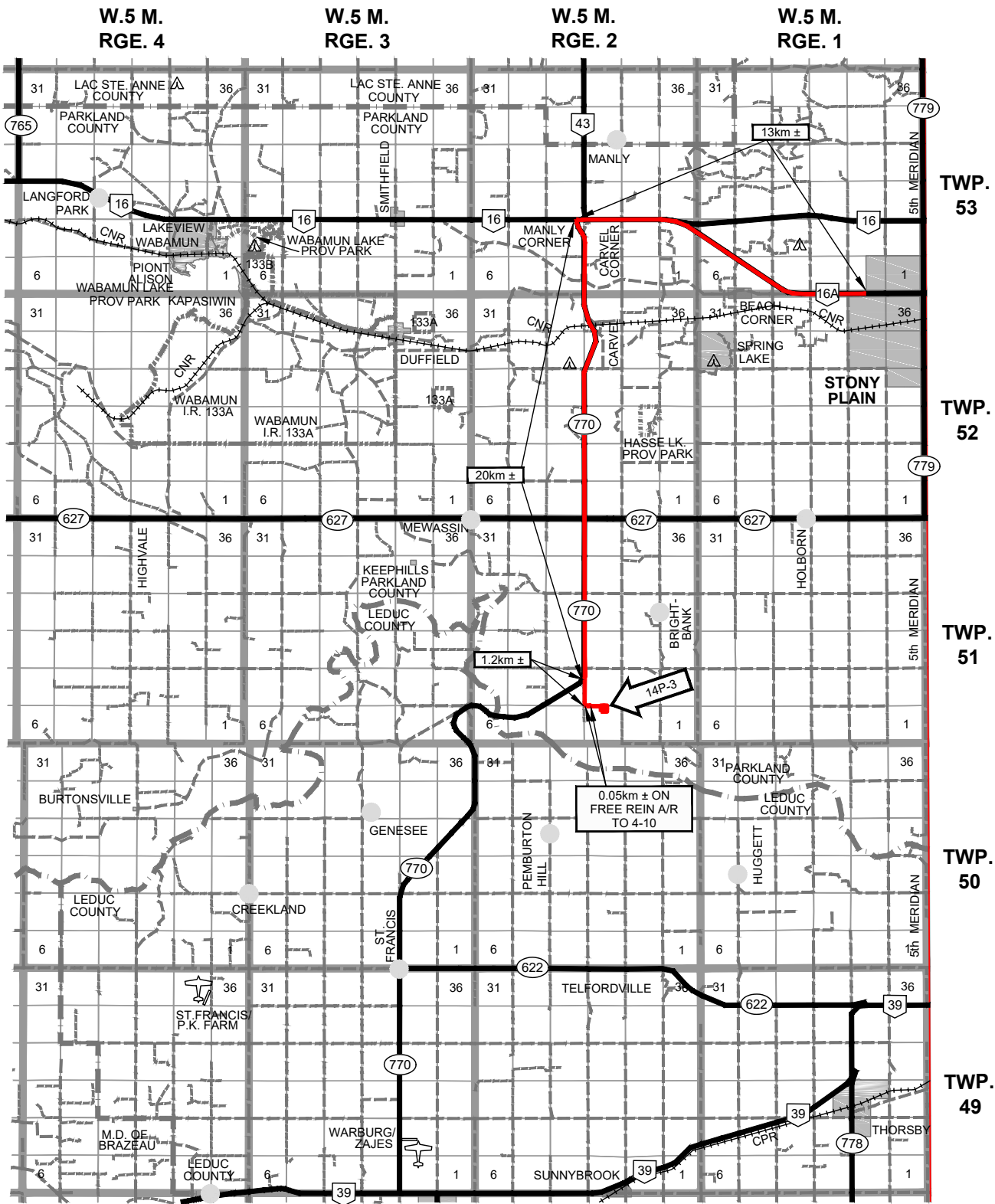
SURFACE DEVELOPMENT SKETCH SCALE 1:30 000

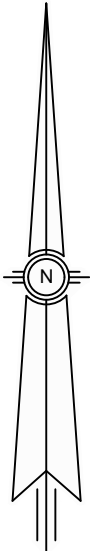
WATER WELL LOCATIONS ARE BASED ON THE ALBERTA WATER WELL DRILLING REPORTS AND HAVE NOT BEEN FIELD VERIFIED, UNLESS OTHERWISE NOTED

ONLY SURFACE DEVELOPMENTS WITHIN 2km OF W/C ARE SHOWN		
Occupied residences shown thus: ■		
Unoccupied residences shown thus: □		
Other surface developments shown thus: ▲		
Water Wells shown thus: ⦿		
NEAREST SURFACE DEVELOPMENT(S)		
	DIRECTION	DISTANCE (±km)
RESIDENCE	W.	0.8
NEAREST URBAN CENTRE(S)		
	DIRECTION	DISTANCE (±km)
KEEPPHILLS	N.W.	10.0



BLACKSPUR PAD SITE 14P-3-51-2 (W.5 M.)





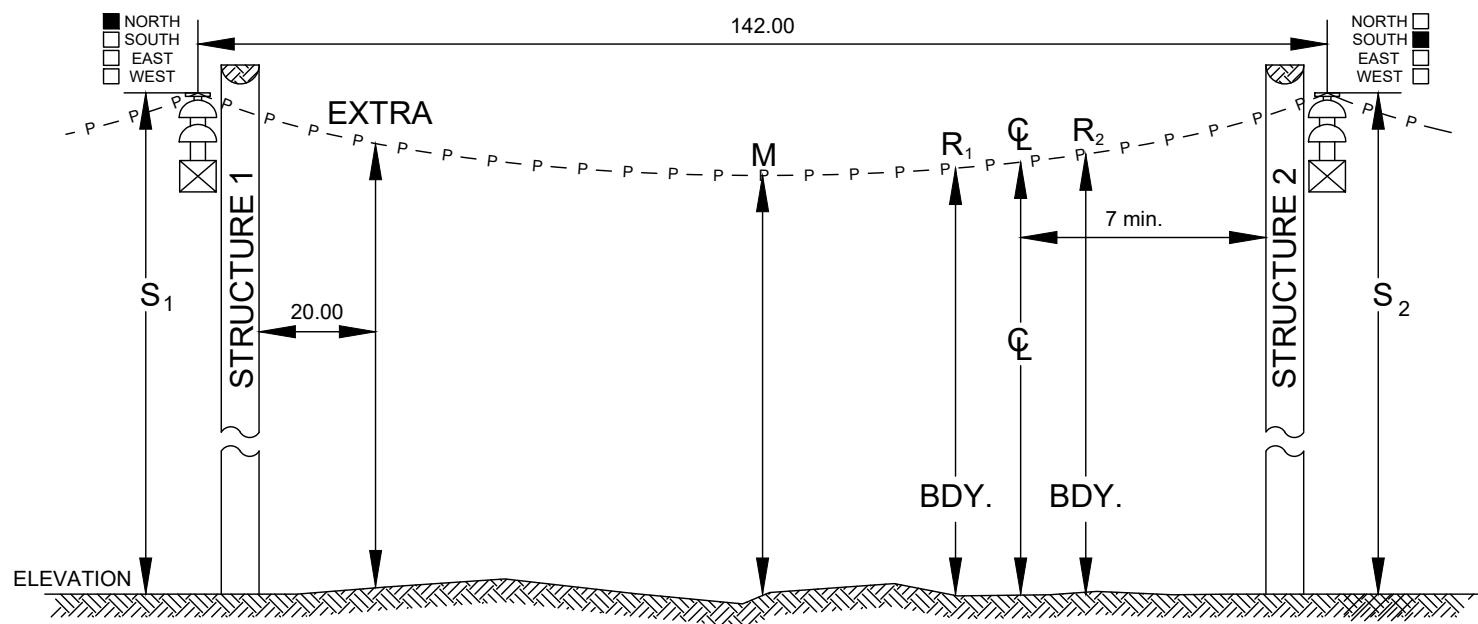
PLAN SHOWING AERIAL PHOTOGRAPHY OF
BLACKSPUR 14-3-51-2 (W.5 M.)



Satellite Image Provided by Planet Labs - Photo Date: 2020.08.16

BLACKSPUR OIL CORP.

SURVEYOR DATA SHEET

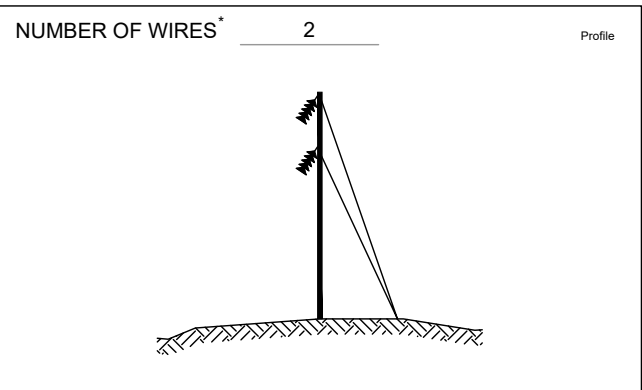


* THIS FORM MUST BE COMPLETELY FILLED OUT *

CROSSING TYPE : A/R ☒ P/L R/W ☐ OTHER ☐ LOCATION : NW 3-51-2-5

DATE July 14th, 2021 TIME 1:46 pm AMBIENT TEMP. 29 °C CONDITIONS SUNNY/SE 10km/h (Sunny/Cloudy/Windy/Calm)

		POINT NO.	CHAINAGE	ELEVATION	H.O.W.	CONDUCTOR (ELEVATION + H.O.W.)	POLE TAG NO. (if available)
S ₁	STRUCTURE 1	302400	0+00.00	744.61	8.79	753.40	LPSK 05 5 40
	EXTRA	302401	0+20.03	743.99	8.21	752.20	
M	MIDSPAN	302406	0+71.02	743.56	7.00	750.56	
R ₁	R/W or A/R BDY.	302404	1+21.87	743.71	7.02	750.73	
	C/L CROSSING	302403	1+31.88	743.71	7.25	750.96	
R ₂	R/W or A/R BDY.						
	EXTRA	302405	1+38.73	743.50	7.69	751.19	
S ₂	STRUCTURE 2	302402	1+42.00	743.64	7.55	751.18	
	-						
	-						



NOTE:

- MEASUREMENTS MUST BE TAKEN FROM EXISTING ELEVATION TO POINT OF CONDUCTOR AT EACH LOCATION
- A MINIMUM OF 7 MEASUREMENTS REQUIRED, MEASUREMENTS TO BE TAKEN TO THE CENTIMETRE
- A PROFILE IS REQUIRED FOR THE LOWEST WIRE OF EACH OPERATOR

ANY QUESTIONS REGARDING THIS PROFILE PLEASE CONTACT:
NAME: Michael Louie PH.: (403)303-2803 EMAIL: Michael.Louie@caltechsurveys.com

CLIENT CONTACT:
Graham Veale



Section 11

Tour Reports

TAL	Kelly Bushing	5.5	Op Fuel	3240.00
	FUEL @ 08:00 HOUR			
	Rig	14922.00	Boiler	7122.00
	Time	06:00	Temp	-29.00
	Current Conditions			
	CLEAR			
	Wind Direction		Wind Strength	
			CALM	
	Road Condition			
	VERY POOR			

TIME	08:00
Sequence & Remarks	

FRONT PAGE SUMMARY

Licence No
0602001

Well Name
BLACKSPUR HZ LEDUC-WB 16-11-51-2

Tour Sheet Serial Number
K0KC43_20220119_1A

Vendor Software Version
Pason

Year
2022

Month
01

Day
19

Surface Location
14-03-051-02W5

Prov
AB

Loc Type
DLS

Unique Well Id
100/16-11-051-02W5/00

Operator
BLACKSPUR OIL CORPORATION
Operator's AFE
21DR0012
Signature of Operator Representative
Mike Bowen

Contractor
HORIZON DRILLING, DIV OF WESC
Contractor's Job No
57
Signature of Contractor's Rig Manager
Scott T Compagnon

Rig No
43

Well Type
HORIZ
Spud Date Time
2022/01/19 14:00
Rig Release Date Time

Re-Entry
☐

DAILY CHECKS

1) Daily Walk Around Inspection

2) Detailed Inspection - Weekly (Using Check List)

3) H2S Signs Posted if Required

4) Well Licence & Stick Diagram Posted

5) Flare Lines Staked

6) BOP Drills Performed

7) Visually Inspected BOPs - Flare Lines & Degasser Lines

1) Rig Site Health & Safety Meeting (one/crew/month)

2) CAOEC Rig Safety Inspection Checklist (one/rig/month)

3) Mast Inspection before Raising or Lowering

4) Crown Saver Checked

5) Motor Kills Checked

OP

RM

CAOEC

CANADIAN ASSOCIATION
OF ENERGY CONTRACTORS

pason

Pason

HOURS	CODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	TOTAL		FUEL @ 08:00 HOURS		
		Rig Up	Drill Actual	Reaming	Coring	Cond Mud & Circ	Trips	Rig Service	Repair Rig	Cut Off Drill Line	Dev Survey	Wireline Logs	Run Csg & Cement	Wait On Cement	Nipple Up BOP	Test BOP	Drillstem Test	Plug Back	Squeeze Cement	Fishing	Dir Work	Safety Meeting	Tear Down	Waiting On	Rig Watch	Other			Rig	Time	
	Tour 1	6.25																				0.25				1.50	8.00				
	Tour 2	5.75																			1.50	0.75				8.00					
	Tour 3		2.75	1.25		1.00															2.75	0.25				8.00					
	Total	12.00	2.75	1.25		1.00															4.25	1.25				1.50	24.00				
																														WEATHER	
																														Kelly Busting	
																														Up Fast	
																														Rig	
																														Temp	
																														Current Conditions	
																														Wind Direction	
																														Wind Strength	
																														Road Condition	

TOUR 1

SIGNATURE OF DRILLER

Tony Campbell

START TIME

00:00

END TIME

08:00

BITS

Bit Number

Size

IADC Code

Manufacturer

Type

Serial No

Jets

Depth Out (m)

Depth In (m)

Total Drilled (m)

Hrs Run Today

Cumulative Hrs Run

Entry Date

CUTTING STRUCTURE

TI

TO

MDC

LOC

BRG

Gage

ODC

Reason Pulled

Total Run (m/hr)

METRES DRILLED

From

To

D-R-C

RPM

WOB

DRILLING ASSEMBLY

No

Component

OD

ID

Length

Drill Pipe

Stands

Drill Pipe

Singles

Kelly Down

Total

Weight of DC

Weight of String

HOLE CONDITION

Hole Drag

Up

Down

Torque at Bottom

Fill on Bottom

MUD RECORD

Mud Type

Water

Oil

Time

Density

Funnel Viscosity

Fluid Loss

pH

Location of Sample

Depth

PVT

CIRCULATION

Pump#

Type

Liner Size

SPM

Pressure

Hours Run

Remarks:

REDUCED PUMP SPEED

Pump No.

Pressure

Strokes/min

Depth

@

@

@

@

DEVIATION SURVEYS

Time

Depth

Deviation

Direction

Type

SOLIDS CONTROL

Equipment Name

Hours Run

Intake Density

Over Flow Density

Under Flow Density

MUD MATERIALS ADDED

Product

Amount

Type

Boiler

Boiler #

Hours Run

pH

Stack Temp

TIME LOG

From

To

Elapsed

Code

Details of Operations in Sequence & Remarks

Remarks:

SAFETY

Safety Topic

MEHL

MACP

Picking up top Drive

TOUR 2

SIGNATURE OF DRILLER

Nick J Wilson

START TIME

08:00

END TIME

16:00

BITS

Bit Number

Size

IADC Code

Manufacturer

Type

Serial No

Jets

Depth Out (m)

Depth In (m)

Total Drilled (m)

Hrs Run Today

Cumulative Hrs Run

Entry Date

CUTTING STRUCTURE

TI

TO

MDC

LOC

BRG

Gage

ODC

Reason Pulled

Total Run (m/hr)

METRES DRILLED

From

To

D-R-C

RPM

WOB

DRILLING ASSEMBLY

No

Component

OD

ID

Length

Drill Pipe

Stands

Drill Pipe

Singles

Kelly Down

Total

Weight of DC

Weight of String

HOLE CONDITION

Hole Drag

Up

Down

Torque at Bottom

Fill on Bottom

MUD RECORD

Mud Type

Water

Oil

Time

Density

Funnel Viscosity

Fluid Loss

pH

Location of Sample

Depth

PVT

CIRCULATION

Pump#

Type

Liner Size

SPM

Pressure

Hours Run

Remarks:

REDUCED PUMP SPEED

Pump No.

Pressure

Strokes/min

Depth

@

@

@

@

DEVIATION SURVEYS

Time

Depth

Deviation

Direction

Type

SOLIDS CONTROL

Equipment Name

Hours Run

Intake Density

Over Flow Density

Under Flow Density

MUD MATERIALS ADDED

Product

Amount

Type

Boiler

Boiler #

Hours Run

pH

Stack Temp

TIME LOG

From

To

Elapsed

Code

Details of Operations in Sequence & Remarks

Remarks:

SAFETY

Safety Topic

MEHL

MACP

extreme cold weather

TOUR 3

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

16:00

END TIME

24:00

BITS

Bit Number

Size

IADC Code

Manufacturer

Type

Serial No

Jets

Depth Out (m)

Depth In (m)

Total Drilled (m)

Hrs Run Today

Cumulative Hrs Run

Entry Date

CUTTING STRUCTURE

TI

TO

MDC

LOC

BRG

Gage

ODC

Reason Pulled

Total Run (m/hr)

METRES DRILLED

From

To

D-R-C

RPM

WOB

DRILLING ASSEMBLY

No

Component

OD

ID

Length

Drill Pipe

Stands

Drill Pipe

Singles

Kelly Down

Total

Weight of DC

Weight of String

HOLE CONDITION

Hole Drag

Up

Down

Torque at Bottom

Fill on Bottom

MUD RECORD

Mud Type

Water

Oil

Time

Density

Funnel Viscosity

Fluid Loss

pH

Location of Sample

Depth

PVT

CIRCULATION

Pump#

Type

Liner Size

SPM

Pressure

Hours Run

Remarks:

REDUCED PUMP SPEED

Pump No.

Pressure

Strokes/min

Depth

@

@

@

@

DEVIATION SURVEYS

Time

Depth

Deviation

Direction

Type

SOLIDS CONTROL

Equipment Name

Hours Run

Intake Density

Over Flow Density

Under Flow Density

MUD MATERIALS ADDED

Product

Amount

Type

Boiler

Boiler #

Hours Run

pH

Stack Temp

TIME LOG

From

To

Elapsed

Code

Details of Operations in Sequence & Remarks

Remarks:

SAFETY

Safety Topic

MEHL

MACP

pre spud

V.1.3

2 of 2

FRONT PAGE SUMMARY

License No
0602001

Well Name
BLACKSPUR HZ LEDUC-WB 16-11-51-2

Operator
BLACKSPUR OIL CORPORATION
Operator's AFE
21DR0012
Signature of Operator Representative
Mike Bowen

Contractor
HORIZON DRILLING, DIV OF WESC
Contractor's Job No
57
Signature of Contractor's Rig Manager
Scott T Compagnon

Rig No
43

Well Type
HORIZ
Spud Date Time
2022/01/19 16:00
Rig Release Date Time

Tour Sheet Serial Number
K0KC43_20220120_1A

Vendor Software Version
Pason

Year
2022

Month
01

Day
20

Surface Location
14-03-051-02W5

Prov
AB

Loc Type
DLS

Unique Well Id
100/16-11-051-02W5/00

Re-Entry
☐

1) Daily Walk Around Inspection
2) Detailed Inspection - Weekly (Using Check List)
3) H2S Signs Posted if Required
4) Well Licence & Stick Diagram Posted
5) Flare Lines Staked
6) BOP Drills Performed
7) Visually Inspected BOPs - Flare Lines & Degasser Lines

1) Rig Site Health & Safety Meeting (one/crew/month)
2) CAOEC Rig Safety Inspection Checklist (one/rig/month)
3) Mast Inspection before Raising or Lowering
4) Crown Saver Checked
5) Motor Kills Checked

OP RM
MB SC
SC
MB SC
MB SC
MB SC
SC SC

Kelly Busting
6.5
On Fall
2087.00

FUEL @ 08:00 HOURS

Rig
12209.00

Rate
4748.00

Time
06:00

Temp
-10.30

Current Conditions
OVERCAST

Wind Direction
Mind Strength
CALM

Road Condition
VERY POOR

CODE

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

Hours

Tour 1

Tour 2

Tour 3

Total

Rig Up

Drill Actual

Reaming

Coring

Cond Mud & Circ

Trips

Rig Service

Repair Rig

Cut Off Drill Log

Dev Survey

Wireline Logs

Run Csg & Cement

Wait On Cement

Nipple Up BOP

Test BOP

Drillstem Test

Plug Back

Squeeze Cement

Fishing

Dir Work

Safety Meeting

Tear Down

Waiting On

Rig Watch

Other

TOTAL

8.00

8.00

8.00

2.25

24.00

TOUR 1

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

00:00

END TIME

08:00

BITS

Bit Number
Size
IADC Code
Manufacturer
Type
Serial No
Jets
Depth Out (m)
Depth In (m)
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
Entry Date

CUTTING STRUCTURE

TI
TO
MDC
LOC
BRG

Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From
To
D-R-C
RPM
WOB

DRILLING ASSEMBLY

No
Component
OD
ID
Length

1 BIT
1 MUD MOTOR
1 X/O BELL SUB
1 PONY SLICK COLLAR
1 FLEX NMDC
1 GAP SUB
1 FLEX NMDC
2 DC (6.25 IN)
1 JARS-HYD/MECH
4 DC (6.25 IN)
1 X/O
18 HWDP (4.5 DS40)

311
205
199
160
160
163
160
165
165
165
165
114

0
0
77
71
72
74
72
57
57
57
58
68

0.30m
8.55m
0.81m
4.09m
9.18m
1.66m
9.35m
18.38m
4.80m
37.06m
0.77m
170.60m

MUD RECORD

Mud Type
Water
Other
Time
Density
Funnel Viscosity
Fluid Loss
pH
Location of Sample
Depth
PVT

CIRCULATION

Pump#
Type
Liner Size
SPM
Pressure
Hours Run

1 COMBINED
2 COMBINED

152
152

70
70

5000
5000

3
3

REDUCED PUMP SPEED

Pump No.
Pressure
Strokes/min
Depth

@
@
@

@
@
@

DEVIATION SURVEYS

Time
Depth
Deviation
Direction
Type

SOLIDS CONTROL

Equipment Name
Hours Run
Intake Density
Over Flow Density
Under Flow Density

MUD MATERIALS ADDED

Product
Amount
Type

Boiler

Boiler #
Hours Run
pH
Stack Temp

1
8
10.5
220

TIME LOG

From
To
Elapsed
Code
Details of Operations in Sequence & Remarks

00:00
02:00
02:15
02:15
03:15
04:00
04:15
06:00
06:30
06:30
06:45
07:15
08:00

02:00
02:15
03:15
04:00
04:15
06:00
06:30
06:30
06:45
07:15
08:00

2.00
0.25
1.00
0.25
0.75
1.75
0.50
0.25
0.50
0.75

3B
2521
10020
12A
12B
21
505
2521
12C

Back ream to tools
Safety meeting with directional
lay out directional tools
Rig up to run casing
Safety meeting with tonghand
Run 24 joints of 244.5mm 53.57kg/m J55 LT/C casing to 271mKB.
Condition mud & circulate
crew change & Trican safety meeting
rig in cementers
Pump 1m3 water. Stop & P/T lines to 19mpa. Pump 2m3 dyed water,14.08m3 (15 tonne)TSC 1700-S bulk cement with 0.4%AFA-7,0.4%TLA, 2%CaCl2. Drop plug & displace with 10.44m3 fresh water. 4.5m3 good cement returns. Plug down @ 07:24am.

SAFETY

Safety Topic
MEHL
MACP

laying out tools with new hands to rig
20.00kdaN

TOUR 2

SIGNATURE OF DRILLER

Tony Campbell

START TIME

08:00

END TIME

16:00

BITS

Bit Number
Size
IADC Code
Manufacturer
Type
Serial No
Jets
Depth Out (m)
Depth In (m)
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
Entry Date

CUTTING STRUCTURE

TI
TO
MDC
LOC
BRG

Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From
To
D-R-C
RPM
WOB

DRILLING ASSEMBLY

No
Component
OD
ID
Length

1 BIT
1 MUD MOTOR
1 PONY SLICK COLLAR
1 FLEX NMDC
1 GAP SUB
1 FLEX NMDC
1 JARS-HYD/MECH
2 HWDP (4.5 DS40)

311
175
160
160
163
160
165
114

0
0
71
72
74
72
57
72

0.28m
8.88m
4.09m
9.18m
1.66m
9.35m
4.80m
255.94m

MUD RECORD

Mud Type
Water
Other
Time
Density
Funnel Viscosity
Fluid Loss
pH
Location of Sample
Depth
PVT

CIRCULATION

Pump#
Type
Liner Size
SPM
Pressure
Hours Run

1
2

152
152

0
0

0
0

0
0

REDUCED PUMP SPEED

Pump No.
Pressure
Strokes/min
Depth

@
@
@

@
@
@

DEVIATION SURVEYS

Time
Depth
Deviation
Direction
Type

SOLIDS CONTROL

Equipment Name
Hours Run
Intake Density
Over Flow Density
Under Flow Density

MUD MATERIALS ADDED

Product
Amount
Type

Boiler

Boiler #
Hours Run
pH
Stack Temp

1
8
10
260

TIME LOG

From
To
Elapsed
Code
Details of Operations in Sequence & Remarks

08:00
09:00
09:00
10:15
10:15
12:30
14:30
14:30
14:45
16:00

09:00
10:15
12:30
2:00
14:30
14:45
16:00

1.00
1.25
2.25
2.00
0.25
1.25

12C
14C
2525
14B
2521
15A

Cementing,flush conductor, rig out cementers
prepare to cut conductor
cut conductor and casing. clean cut on casing weld on bowl
Nipple down BOPs
Safety meeting with pressure tester
Pressure test kill line .. manual valve .. manifold valves 1400 kpa low & 14000 kpa high to 10 mins on each test

SAFETY

Safety Topic
MEHL
MACP

pressure testing

TOUR 3

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

16:00

END TIME

24:00

BITS

Bit Number
Size
IADC Code
Manufacturer
Type
Serial No
Jets
Depth Out (m)
Depth In (m)
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
Entry Date

CUTTING STRUCTURE

TI
TO
MDC
LOC
BRG

Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From
To
D-R-C
RPM
WOB

DRILLING ASSEMBLY

No
Component
OD
ID
Length

1 BIT
1 MUD MOTOR
1 PONY SLICK COLLAR
1 FLEX NMDC
1 GAP SUB
1 FLEX NMDC
1 JARS-HYD/MECH
2 HWDP (4.5 DS40)

311
175
160
160
163
160
165
114

0
0
71
72
74
72
57
72

0.28m
8.88m
4.09m
9.18m
1.66m
9.35m
4.80m
255.94m

MUD RECORD

Mud Type
Water
Other
Time
Density
Funnel Viscosity
Fluid Loss
pH
Location of Sample
Depth
PVT

CIRCULATION

Pump#
Type
Liner Size
SPM
Pressure
Hours Run

1 COMBINED
2 COMBINED

152
152

54
54

6000
6000

2
2

REDUCED PUMP SPEED

Pump No.
Pressure
Strokes/min
Depth

@
@
@

@
@
@

DEVIATION SURVEYS

Time
Depth
Deviation
Direction
Type

SOLIDS CONTROL

Equipment Name
Hours Run
Intake Density
Over Flow Density
Under Flow Density

MUD MATERIALS ADDED

Product
Amount
Type

Potassium carbonate
7 sacks

Boiler

Boiler #
Hours Run
pH
Stack Temp

1
8
10
260

TIME LOG

From
To
Elapsed
Code
Details of Operations in Sequence & Remarks

16:00
18:30
18:30
18:45
19:00
19:00
19:15
19:15
21:00
22:00
22:00
22:30
23:30
24:00

18:30
18:45
19:00
19:15
21:00
22:00
22:30
23:30
24:00

2.50
0.25
0.25
0.25
1.00
0.50
1.00
0.50

15A
2521
15B
21
21A
21A
2C

Pressure test BOPs annular , pipe rams , blind rams, hcr @ 14000kpa
crew hand over
Function test BOPs start press. 19000kpa, annular 17 secs to close , 7800kpa loss press. / pipe rams 5 secs to close , 2100kpa loss press. / hcr 2 secs to open , 100kpa loss press. / remaining press. 9200kpa, time to recharge 1min, 59secs, ft motor kills .pre-charge =6800kpa, N2 bottles #1 =2400 2400psi, #2=2400psi, #3=2500psi, #4=2400psi
Safety meeting with directional
Make up directional tools
Trip in hole
BOP drill with rig crew, companyman and rig manager
Drill cement/drill out cement/drill float&shoe
Drill 222mm hole from 271m to 300m

SAFETY

Safety Topic
MEHL
MACP

b/u dir. tools
24.00kdaN
2200kPa

V.1.3

1 of 1

FRONT PAGE SUMMARY

Licence No
0602001

Well Name
BLACKSPUR HZ LEDUC-WB 16-11-51-2

Tour Sheet Serial Number
K0KC43_20220121_1A

Vendor Software Version
Pason

Year
2022

Month
01

Day
21

Surface Location
14-03-051-02W5

Prov
AB

Loc Type
DLS

Unique Well Id
100/16-11-051-02W5/00

Operator
BLACKSPUR OIL CORPORATION
Operator's AFE
21DR0012
Signature of Operator Representative
Mike Bowen

Contractor
HORIZON DRILLING, DIV OF WESC
Contractor's Job No
57
Signature of Contractor's Rig Manager
Scott T Compagnon

Rig No
43

Well Type
HORIZ
Spud Date Time
2022/01/19 16:00
Rig Release Date Time

Re-Entry
☐

DAILY CHECKS

1) Daily Walk Around Inspection

2) Detailed Inspection - Weekly (Using Check List)

3) H2S Signs Posted if Required

4) Well Licence & Stick Diagram Posted

5) Flare Lines Staked

6) BOP Drills Performed

7) Visually Inspected BOPs - Flare Lines & Degasser Lines

1) Rig Site Health & Safety Meeting (one/crew/month)

2) CAOEC Rig Safety Inspection Checklist (one/rig/month)

3) Mast Inspection before Raising or Lowering

4) Crown Saver Checked

5) Motor Kills Checked

OP

RM

CAOEC

CANADIAN ASSOCIATION
OF ENERGY CONTRACTORS

pason

Pason

HOURS	CODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	TOTAL		FUEL @ 08:00 HOURS	
		Rig Up	Drill Actual	Reaming	Coring	Cond Mud & Circ	Trips	Rig Service	Repair Rig	Cut Off Drill Line	Dev Survey	Wireline Logs	Run Csg & Cement	Wait On Cement	Nipple Up BOP	Test BOP	Drillstem Test	Plug Back	Squeeze Cement	Fishing	Dir Work	Safety Meeting	Tear Down	Waiting On	Rig Watch	Other			Rig	Time
	Tour 1		4.00					0.25													3.50	0.25					8.00			
	Tour 2		4.00					0.25													3.50	0.25					8.00			
	Tour 3		4.50					0.25													3.00	0.25					8.00			
	Total		12.50					0.75													10.00	0.75					24.00			

TOUR 1

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

00:00

END TIME

08:00

BITS

Bit Number
Size
IADC Code
Manufacturer
Type
Serial No
Jets
Depth Out (m)
Depth In (m)
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
Entry Date

CUTTING STRUCTURE

TI
TO
MDC
LOC
BRG
Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From
To
D-R-C
RPM
WOB

DRILLING ASSEMBLY

No
Component
OD
ID
Length
Drill Pipe
Standards
Drill Pipe
Singles
Kelly Down
Total
Weight of DC
Weight of String

HOLE CONDITION

Hole Drag
Up
Down
Torque at Bottom
Fill on Bottom

MUD RECORD

Mud Type
Water
Oil
Time
Density
Funnel Viscosity
Fluid Loss
pH
Location of Sample
Depth
PVT
CIRCULATION
Pump#
Type
Liner Size
SPM
Pressure
Hours Run
Remarks:

REDUCED PUMP SPEED

Pump No.
Pressure
Strokes/min
Depth
2
1200
@
31
@
@
@

DEVIATION SURVEYS

Time
Depth
Deviation
Direction
Type
SOLIDS CONTROL
Equipment Name
Hours Run
Intake Density
Over Flow Density
Under Flow Density
MUD MATERIALS ADDED
Product
Amount
Type
Boiler
Boiler #
Hours Run
pH
Stack Temp

TIME LOG

From
To
Elapsed
Code
Details of Operations in Sequence & Remarks
SAFETY
Safety Topic
MEHL
MACP
Mentoring green hands
32.00kdaN
2250kPa

TOUR 2

SIGNATURE OF DRILLER

Tony Campbell

START TIME

08:00

END TIME

16:00

BITS

Bit Number
Size
IADC Code
Manufacturer
Type
Serial No
Jets
Depth Out (m)
Depth In (m)
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
Entry Date

CUTTING STRUCTURE

TI
TO
MDC
LOC
BRG
Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From
To
D-R-C
RPM
WOB

DRILLING ASSEMBLY

No
Component
OD
ID
Length
Drill Pipe
Standards
Drill Pipe
Singles
Kelly Down
Total
Weight of DC
Weight of String

HOLE CONDITION

Hole Drag
Up
Down
Torque at Bottom
Fill on Bottom

MUD RECORD

Mud Type
Water
Oil
Time
Density
Funnel Viscosity
Fluid Loss
pH
Location of Sample
Depth
PVT
CIRCULATION
Pump#
Type
Liner Size
SPM
Pressure
Hours Run
Remarks:

REDUCED PUMP SPEED

Pump No.
Pressure
Strokes/min
Depth
@
@
@
@

DEVIATION SURVEYS

Time
Depth
Deviation
Direction
Type
SOLIDS CONTROL
Equipment Name
Hours Run
Intake Density
Over Flow Density
Under Flow Density
MUD MATERIALS ADDED
Product
Amount
Type
Boiler
Boiler #
Hours Run
pH
Stack Temp

TIME LOG

From
To
Elapsed
Code
Details of Operations in Sequence & Remarks
SAFETY
Safety Topic
MEHL
MACP
bop drill
60.00kdaN
2250kPa

TOUR 3

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

16:00

END TIME

24:00

BITS

Bit Number
Size
IADC Code
Manufacturer
Type
Serial No
Jets
Depth Out (m)
Depth In (m)
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
Entry Date

CUTTING STRUCTURE

TI
TO
MDC
LOC
BRG
Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From
To
D-R-C
RPM
WOB

DRILLING ASSEMBLY

No
Component
OD
ID
Length
Drill Pipe
Standards
Drill Pipe
Singles
Kelly Down
Total
Weight of DC
Weight of String

HOLE CONDITION

Hole Drag
Up
Down
Torque at Bottom
Fill on Bottom

MUD RECORD

Mud Type
Water
Oil
Time
Density
Funnel Viscosity
Fluid Loss
pH
Location of Sample
Depth
PVT
CIRCULATION
Pump#
Type
Liner Size
SPM
Pressure
Hours Run
Remarks:

REDUCED PUMP SPEED

Pump No.
Pressure
Strokes/min
Depth
@
@
@
@

DEVIATION SURVEYS

Time
Depth
Deviation
Direction
Type
SOLIDS CONTROL
Equipment Name
Hours Run
Intake Density
Over Flow Density
Under Flow Density
MUD MATERIALS ADDED
Product
Amount
Type
Boiler
Boiler #
Hours Run
pH
Stack Temp

TIME LOG

From
To
Elapsed
Code
Details of Operations in Sequence & Remarks
SAFETY
Safety Topic
MEHL
MACP
mentoring green hands
60.00kdaN
2110kPa

V. 1.3

2 of 6

FRONT PAGE SUMMARY

Licence No
0602001

Well Name
BLACKSPUR HZ LEDUC-WB 16-11-51-2

Operator
BLACKSPUR OIL CORPORATION
Operator's AFE
21DR0012
Signature of Operator Representative
Mike Bowen

Contractor
HORIZON DRILLING, DIV OF WESC
Contractor's Job No
57
Signature of Contractor's Rig Manager
Scott T Compagnon

Rig No
43

Well Type
HORIZ
Spud Date Time
2022/01/19 16:00
Rig Release Date Time

Tour Sheet Serial Number
K0KC43_20220121_1A

Pason

Vendor Software Version

Year
2022

Month
01

Day
21

Surface Location
14-03-051-02W5

Prov
AB

Loc Type
DLS

Unique Well Id
100/16-11-051-02W5/00

Re-Entry
☐

1) Daily Walk Around Inspection
2) Detailed Inspection - Weekly (Using Check List)
3) H2S Signs Posted if Required
4) Well Licence & Stick Diagram Posted
5) Flare Lines Staked
6) BOP Drills Performed
7) Visually Inspected BOPs - Flare Lines & Degasser Lines

1) Rig Site Health & Safety Meeting (one/crew/month)
2) CAOEC Rig Safety Inspection Checklist (one/rig/month)
3) Mast Inspection before Raising or Lowering
4) Crown Saver Checked
5) Motor Kills Checked

CAOEC

CANADIAN ASSOCIATION
OF ENERGY CONTRACTORS

pason

Pason

CODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	TOTAL		FUEL @ 08:00 HOURS	
	Rig Up	Drill Actual	Reaming	Coring	Cond Mud & Circ	Trips	Rig Service	Repair Rig	Cut Off Drill Line	Dev Survey	Wireline Logs	Run Csg & Cement	Wait On Cement	Nipple Up BOP	Test BOP	Drillstem Test	Plug Back	Squeeze Cement	Fishing	Dir Work	Safety Meeting	Tear Down	Waiting On	Rig Watch	Other			Rig	Time
Tour 1		4.00					0.25													3.50	0.25					8.00			
Tour 2		4.00					0.25													3.50	0.25					8.00			
Tour 3		4.50					0.25													3.00	0.25					8.00			
Total		12.50					0.75													10.00	0.75					24.00			

TOUR 1

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

00:00

END TIME

08:00

BITS

Bit Number
Size
IADC Code
Manufacturer
Type
Serial No
Jets
Depth Out (m)
Depth In (m)
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
Entry Date

CUTTING STRUCTURE
TI
TO
MDC
LOC
BRG
Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED
From
To
D-R-C
RPM
WOB

DRILLING ASSEMBLY

No
Component
OD
ID
Length
Drill Pipe
Standards
Drill Pipe
Singles
Kelly Down
Total
Weight of DC
Weight of String

HOLE CONDITION
Hole Drag
Up
Down
Torque at Bottom
Fill on Bottom

MUD RECORD

Mud Type
Water
Oil
Time
Density
Funnel Viscosity
Fluid Loss
pH
Location of Sample
Depth
PVT
CIRCULATION
Pump#
Type
Liner Size
SPM
Pressure
Hours Run
Remarks:

REDUCED PUMP SPEED
Pump No.
Pressure
Strokes/min
Depth
@
@
@

DEVIATION SURVEYS

Time
Depth
Deviation
Direction
Type
SOLIDS CONTROL
Equipment Name
Hours Run
Intake Density
Over Flow Density
Under Flow Density
MUD MATERIALS ADDED
Product
Amount
Type
Boiler
Boiler #
Hours Run
pH
Stack Temp

TIME LOG
From
To
Elapsed
Code
Details of Operations in Sequence & Remarks
SAFETY
Safety Topic
MEHL
MACP
Mentoring green hands
32.00kdaN
2250kPa

TOUR 2

SIGNATURE OF DRILLER

Tony Campbell

START TIME

08:00

END TIME

16:00

BITS

Bit Number
Size
IADC Code
Manufacturer
Type
Serial No
Jets
Depth Out (m)
Depth In (m)
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
Entry Date

CUTTING STRUCTURE
TI
TO
MDC
LOC
BRG
Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED
From
To
D-R-C
RPM
WOB

DRILLING ASSEMBLY

No
Component
OD
ID
Length
Drill Pipe
Standards
Drill Pipe
Singles
Kelly Down
Total
Weight of DC
Weight of String

HOLE CONDITION
Hole Drag
Up
Down
Torque at Bottom
Fill on Bottom

MUD RECORD

Mud Type
Water
Oil
Time
Density
Funnel Viscosity
Fluid Loss
pH
Location of Sample
Depth
PVT
CIRCULATION
Pump#
Type
Liner Size
SPM
Pressure
Hours Run
Remarks:

REDUCED PUMP SPEED
Pump No.
Pressure
Strokes/min
Depth
@
@
@

DEVIATION SURVEYS

Time
Depth
Deviation
Direction
Type
SOLIDS CONTROL
Equipment Name
Hours Run
Intake Density
Over Flow Density
Under Flow Density
MUD MATERIALS ADDED
Product
Amount
Type
Boiler
Boiler #
Hours Run
pH
Stack Temp

TIME LOG
From
To
Elapsed
Code
Details of Operations in Sequence & Remarks
SAFETY
Safety Topic
MEHL
MACP
bop drill
60.00kdaN
2250kPa

TOUR 3

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

16:00

END TIME

24:00

BITS

Bit Number
Size
IADC Code
Manufacturer
Type
Serial No
Jets
Depth Out (m)
Depth In (m)
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
Entry Date

CUTTING STRUCTURE
TI
TO
MDC
LOC
BRG
Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED
From
To
D-R-C
RPM
WOB

DRILLING ASSEMBLY

No
Component
OD
ID
Length
Drill Pipe
Standards
Drill Pipe
Singles
Kelly Down
Total
Weight of DC
Weight of String

HOLE CONDITION
Hole Drag
Up
Down
Torque at Bottom
Fill on Bottom

MUD RECORD

Mud Type
Water
Oil
Time
Density
Funnel Viscosity
Fluid Loss
pH
Location of Sample
Depth
PVT
CIRCULATION
Pump#
Type
Liner Size
SPM
Pressure
Hours Run
Remarks:

REDUCED PUMP SPEED
Pump No.
Pressure
Strokes/min
Depth
@
@
@

DEVIATION SURVEYS

Time
Depth
Deviation
Direction
Type
SOLIDS CONTROL
Equipment Name
Hours Run
Intake Density
Over Flow Density
Under Flow Density
MUD MATERIALS ADDED
Product
Amount
Type
Boiler
Boiler #
Hours Run
pH
Stack Temp

TIME LOG
From
To
Elapsed
Code
Details of Operations in Sequence & Remarks
SAFETY
Safety Topic
MEHL
MACP
mentoring green hands
60.00kdaN
2110kPa

V.1.3

3 of 6

MUD SAMPLE - ADDITIONAL DATA

Tour Sheet Serial No

A0KC43_20220121_1A

Vendor Software Version

Pason

Year

2022

Month

01

Day

21

License No

0502001

Well Name

BLACKSPUR HZ LEDUC-WB 16-11-51-2

Surface Location

14-03-051-02W5

Prov

AB

Loc Type

DLS

Unique Well Id

100/16-11-051-02W5/00

Operator

BLACKSPUR OIL CORPORATION

Contractor

HORIZON DRILLING, DIV OF WESC

Rig No

43

Well Type

HORIZ

Re-Entry

☐

Operator's AFE

21DR0012

Contractor's Job No

57

Spud Date Time

2022/01/19 16:00

Signature of Operator Representative

Mike Bowen

Signature of Contractor's Rig Manager

Scott T Compagnon

Rig Release Date Time



Pason

TOUR		1	MUD TYPE				SILICATE	WATER				x	OIL		OTHER			
	Time		01:00	03:00	06:00	01:00												
	Density		1040kg/m3	1040kg/m3	1040kg/m3	1050kg/m3												
	Funnel Viscosity		30s/l	30s/l	30s/l	30s/l												
	Fluid Loss																	
	Fluid pH																	
	Location of Sample		SHAKER	SHAKER	SHAKER	SHAKERS												
	Depth		361m	461m	610m	816m												
	PVT		36m3	30m3	34.6m3	29.4m3												
Test 1	Type (Ex: Chlorides)																	
	Value																	
Test 2	Type (ex: Sand%)																	
	Value																	
Test 3	Type (ex: Hard Ca)																	
	Value																	
Test 4	Type (ex: Sulfides)																	
	Value																	

MUD SAMPLE REMARKS

MUD SAMPLE - ADDITIONAL DATA				Tour Sheet Serial No	Vendor Software Version		Year	Month	Day
				A0KC43_20220121_1A	Pason		2022	01	21
License No	Well Name			Surface Location		Prov	Loc Type	Unique Well Id	
0502001	BLACKSPUR HZ LEDUC-WB 16-11-51-2			14-03-051-02W5		AB	DLS	100/16-11-051-02W5/00	
Operator		Contractor			Rig No	Well Type		Re-Entry	
BLACKSPUR OIL CORPORATION		HORIZON DRILLING, DIV OF WESC			43	HORIZ		<input type="checkbox"/>	
Operator's AFE		Contractor's Job No			Spud Date Time				
21DR0012		57			2022/01/19 16:00				
Signature of Operator Representative		Signature of Contractor's Rig Manager			Rig Release Date Time				
Mike Bowen		Scott T Compagnon							

[illegible]

MUD SAMPLE - ADDITIONAL DATA

Tour Sheet Serial No

A0KC43_20220121_1A

Vendor Software Version

Pason

Year

2022

Month

01

Day

21

License No

0502001

Well Name

BLACKSPUR HZ LEDUC-WB 16-11-51-2

Surface Location

14-03-051-02W5

Prov

AB

Loc Type

DLS

Unique Well Id

100/16-11-051-02W5/00

Operator

BLACKSPUR OIL CORPORATION

Contractor

HORIZON DRILLING, DIV OF WESC

Rig No

43

Well Type

HORIZ

Re-Entry

☐

Operator's AFE

21DR0012

Contractor's Job No

57

Spud Date Time

2022/01/19 16:00

Signature of Operator Representative

Mike Bowen

Signature of Contractor's Rig Manager

Scott T Compagnon

Rig Release Date Time



Pason

TOUR		MUD TYPE				WATER				OIL		OTHER			
3		SILICATE				x									
	Time	19:00	21:00	23:30											
	Density	1040kg/m3	1050kg/m3	1060kg/m3											
	Funnel Viscosity	40s/l	45s/l	47s/l											
	Fluid Loss	9cm3	8cm3	7cm3											
	Fluid pH	12	12	12											
	Location of Sample	SHAKER	SHAKER	SHAKER											
	Depth	1177m	1221m												
	PVT	30m3	29m3												
Test 1	Type (Ex: Chlorides)														
	Value														
Test 2	Type (ex: Sand%)														
	Value														
Test 3	Type (ex: Hard Ca)														
	Value														
Test 4	Type (ex: Sulfides)														
	Value														

MUD SAMPLE REMARKS

FRONT PAGE SUMMARY

Licence No
0602001

Well Name
BLACKSPUR HZ LEDUC-WB 16-11-51-2

Operator
BLACKSPUR OIL CORPORATION
Operator's AFE
21DR0012

Signature of Operator Representative
Mike Bowen

Tour Sheet Serial Number
K0KC43_20220122_1A

Surface Location
14-03-051-02W5

Vendor Software Version
Pason

Prov
AB

Loc Type
DLS

Unique Well Id
10016-11-051-02W5/00

Year
2022

Month
01

Day
22

OP RM
MB SC
MB SC
MB SC
MB SC

1) Daily Walk Around Inspection

2) Detailed Inspection - Weekly (Using Check List)

3) H2S Spills Posted if Required

4) Well Licence & Stick Diagram Posted

5) Flare Lines Staked

6) BOP Drills Performed

7) Visually Inspected BOPs - Flare Lines & Degasser Lines

1) Rig Site Health & Safety Meeting (one/crew/month)

2) CAOEC Rig Safety Inspection Checklist (one/rig/month)

3) Mast Inspection before Raising or Lowering

4) Crown Saver Checked

5) Motor Kills Checked

Re-Entry
☐

SC

CAOEC

Canadian Association of Offshore Contractors

CAOEC

Pason

CODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
	Rig Up	Drill Actual	Reaming	Coring	Cond Mud & Circ	Trips	Rig Service	Repair Rig	Cut Off Drill Log	Dev Survey	Wireline Logs	Run Csg & Cement	Wait On Cement	Nipple Up BOP	Test BOP	Drillstem Test	Plug Back	Squeeze Cement	Fishing	Dir Work	Safety Meeting	Tear Down	Waiting On	Rig Watch	Other	TOTAL
Tour 1		5.00					0.25													2.50	0.25					8.00
Tour 2		3.50			0.50	0.75	0.25													3.00						8.00
Tour 3					0.50	7.00	0.25														0.25					8.00
Total		8.50			1.00	7.75	0.75													5.50	0.50					24.00

Hours

12277.00

10242.00

06:00

4:20

OVERCAST

Wind Direction

Wind Strength

Cloud Condition

VERY POOR

TOUR 1

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

00:00

END TIME

08:00

BITS

Bit Number
2

Size
222

IADC Code

Manufacturer
halliburton

Type
GTD54RM

Serial No
13636522

Jets
10.3 10.3 10.3 10.3
10.3 10.3 10.3 10.3

Depth Out (m)

Depth In (m)
271

Total Drilled (m)
1192

Hrs Run Today
4.75

Cumulative Hrs Run
17.75

Entry Date
2022/01/20

CUTTING STRUCTURE

TI
TO
MDC
LOC
BRG

Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From
1292m

To
1463m

D-R-C
DRILL

RPM
45

WOB
8kdaN

HOLE CONDITION

Hole Drag
Up
7

Down
6

Torque at Bottom
6500.00Nm

Fill on Bottom
0.00m

DRILLING ASSEMBLY

No
40

Component
Drill Pipe

OD
311

ID
311

Length
0.28m

1 BIT

1 MUD MOTOR

175

0

8.88m

1 PONY SLICK COLLAR

160

71

4.09m

1 FLEX NMDC

160

72

9.18m

1 GAP SUB

163

74

1.66m

1 FLEX NMDC

160

72

9.35m

1 JARS-HYD/MECH

165

57

4.80m

1 X/O

165

1

7.7m

70 HWDP (4.5 DS40)

114

72

664.15m

MUD RECORD

Mud Type
Water

Oil

Time
01:00
03:00

Density
1050

Funnel Viscosity
48s/l

Fluid Loss
6cm3

pH
12

Location of Sample
SHAKER SHAKER

Depth
1305m

PVT
28m3

CIRCULATION

Pump#
1

Type
COMBINED

Liner Size
152

SPM
62

Pressure
11000

Hours Run
8

2 COMBINED

152

62

11000

8

REDUCED PUMP SPEED

Hole Drag
Up
7

Down
6

Torque at Bottom
6500.00Nm

Fill on Bottom
0.00m

DEVIATION SURVEYS

Time
00:00
00:30
01:00
01:15
01:45
02:00
02:45

Depth
1285.75m
1295.22m
1304.87m
1314.34m
1324m
1333.45m
1342.94m

Deviation
44.9
46.6
48.5
48
48.5
49.1
50.8

Direction
87.1
87.1
87.4
87
87.1
87
86.8

Type

SOLIDS CONTROL

Equipment Name
CENTRIFUGE

Hours Run
8

Intake Density
1050

Over Flow Density
1030

Under Flow Density
1805

MUD MATERIALS ADDED

Product
CONTONE
NANOBLK
PRIMOSSU
UNISEAL
HYPERDRILL 247
UNIPAC HYD
UNISTAR

Amount
29
29
29
29
1
4
4

Type
sacks
sacks
sacks
sacks
sacks
sacks
sacks

TIME LOG

From
00:00
04:00
06:30
06:30
06:45
07:45

To
04:00
06:30
06:45
07:45
08:00

Elapsed
4.002
2.5020A
0.2521
1.002
0.257

Code
Drill 222mm build section fr/ 1292m to 1420m
Directional surveys , connections , worked pipe
crew hand over
Drill 222mm build section fr/ 1420m to 1463m
Rig Service/ function pipe rams 5 secs to close

Details of Operations in Sequence & Remarks

SAFETY

Safety Topic
dressing casing

MEHL
60.00kdaN

MACP
2100kPa

TOUR 2

SIGNATURE OF DRILLER

Tony Campbell

START TIME

08:00

END TIME

16:00

BITS

Bit Number
2

Size
222

IADC Code

Manufacturer
halliburton

Type
GTD54RM

Serial No
13636522

Jets
10.3 10.3 10.3 10.3
10.3 10.3 10.3 10.3

Depth Out (m)

Depth In (m)
271

Total Drilled (m)
1344

Hrs Run Today
3.50

Cumulative Hrs Run
21.25

Entry Date
2022/01/20

CUTTING STRUCTURE

TI
TO
MDC
LOC
BRG

Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From
1463m

To
1615m

D-R-C
DRILL

RPM
45

WOB
10kdaN

HOLE CONDITION

Hole Drag
Up
a

Down
a

Torque at Bottom
6500.00Nm

Fill on Bottom

DRILLING ASSEMBLY

No
48

Component
Drill Pipe

OD
311

ID
311

Length
0.28m

1 BIT

1 MUD MOTOR

175

0

8.88m

1 PONY SLICK COLLAR

160

71

4.09m

1 FLEX NMDC

160

72

9.18m

1 GAP SUB

163

74

1.66m

1 FLEX NMDC

160

72

9.35m

1 JARS-HYD/MECH

165

57

4.80m

1 X/O

165

1

7.7m

70 HWDP (4.5 DS40)

114

72

664.15m

MUD RECORD

Mud Type
Water

Oil

Time
09:30
12:30

Density
1060

Funnel Viscosity
57s/l

Fluid Loss
5cm3

pH
12

Location of Sample
SHAKERS SHAKERS

Depth
1491m

PVT
30m3

CIRCULATION

Pump#
1

Type
COMBINED

Liner Size
152

SPM
62

Pressure
12500

Hours Run
6

2 COMBINED

152

62

12500

6

REDUCED PUMP SPEED

Hole Drag
Up
a

Down
a

Torque at Bottom
6500.00Nm

Fill on Bottom

DEVIATION SURVEYS

Time
08:00
08:15
08:45
09:15
09:30
10:00
10:15

Depth
1456.9m
1466.34m
1475.84m
1485.33m
1494.99m
1504.47m
1513.92m

Deviation
69.6
70.8
73.4
75.5
77.3
78.6
79.9

Direction
87.4
88.1
87.3
87.4
87.8
87.6
88.2

Type

SOLIDS CONTROL

Equipment Name
CENTRIFUGE

Hours Run
8

Intake Density
1060

Over Flow Density
1040

Under Flow Density
1690

MUD MATERIALS ADDED

Product
BLOK
ULTRA SEAL
PRIMA-SEAL MEDIUM
CONTONE
POLYZAN

Amount
9
6
6
6
7

Type
sacks
sacks
sacks
sacks
sacks

TIME LOG

From
08:00
11:30
14:30
15:00
15:15

To
11:00
14:30
15:00
15:15
16:00

Elapsed
3.0020A
3.502
0.505D
0.257
0.755M

Code
Directional surveys , connections , worked pipe
Drill 222mm build section fr/ 1463m- 1615, Pump tangent 1431mKB- 1463mKB
Circulate hole clean
Rig Service f/t hr 2 secs to open
Wiper Trip , back ream build section to 1479m

Details of Operations in Sequence & Remarks

SAFETY

Safety Topic
back reaming

MEHL
60.00kdaN

MACP
2100kPa

TOUR 3

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

16:00

END TIME

24:00

BITS

Bit Number
2

Size
222

IADC Code

Manufacturer
halliburton

Type
GTD54RM

Serial No
13636522

Jets
10.3 10.3 10.3 10.3
10.3 10.3 10.3 10.3

Depth Out (m)

Depth In (m)
271

Total Drilled (m)
1344

Hrs Run Today

Cumulative Hrs Run
21.25

Entry Date
2022/01/20

CUTTING STRUCTURE

TI
TO
MDC
LOC
BRG

Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From
1615m

To
1715m

D-R-C
DRILL

RPM
45

WOB
10kdaN

HOLE CONDITION

Hole Drag
Up
a

Down
a

Torque at Bottom
6500.00Nm

Fill on Bottom

DRILLING ASSEMBLY

No
48

Component
Drill Pipe

OD
311

ID
311

Length
0.28m

1 BIT

1 MUD MOTOR

175

0

8.88m

1 PONY SLICK COLLAR

160

71

4.09m

1 FLEX NMDC

160

72

9.18m

1 GAP SUB

163

74

1.66m

1 FLEX NMDC

160

72

9.35m

1 JARS-HYD/MECH

165

57

4.80m

1 X/O

165

1

7.7m

70 HWDP (4.5 DS40)

114

72

664.15m

MUD RECORD

Mud Type
Water

Oil

Time
23:00

Density
1060

Funnel Viscosity
76s/l

Fluid Loss
6cm3

pH
12

Location of Sample
SHAKERS

Depth
701m

PVT
19m3

CIRCULATION

Pump#
1

Type
COMBINED

Liner Size
152

SPM
62

Pressure
12000

Hours Run
4

2 COMBINED

152

62

12000

4

REDUCED PUMP SPEED

Hole Drag
Up
a

Down
a

Torque at Bottom
6500.00Nm

Fill on Bottom

DEVIATION SURVEYS

Time
16:00
18:30
18:30
18:45
19:15
21:30
23:45

Depth
1456.9m
1466.34m
1475.84m
1485.33m
1494.99m
1504.47m
1513.92m

Deviation
69.6
70.8
73.4
75.5
77.3
78.6
79.9

Direction
87.4
88.1
87.3
87.4
87.8
87.6
88.2

Type

SOLIDS CONTROL

Equipment Name
CENTRIFUGE

Hours Run
8

Intake Density
1060

Over Flow Density
1040

Under Flow Density
1690

MUD MATERIALS ADDED

Product
BLOK
ULTRA SEAL
PRIMA-SEAL MEDIUM
CONTONE
POLYZAN

Amount
9
6
6
6
7

Type
sacks
sacks
sacks
sacks
sacks

TIME LOG

From
16:00
18:30
18:30
18:45
19:15
21:30
23:45

To
18:30
18:45
19:15
21:30
23:45
24:00

Elapsed
2.505M
0.2521
0.505D
2.255M
2.255A
0.257

Code
Wiper Trip , back ream build section to 1000m
crew hand over
Circulate hole clean
Wiper Trip to shoe, flow check @ 266m, hole fill meas. 4.83m3, calc. 3.69m3, diff. + 1.14m3
Trip in hole, Clean Bridges @ 705m, 810m, 865m
Rig Service/ function HCR 3 secs to close

Details of Operations in Sequence & Remarks

SAFETY

Safety Topic
TRIPPING OUT

MEHL
60.00kdaN

MACP
2100kPa

V.1.3

1 of 6

FRONT PAGE SUMMARY

Licence No
0602001

Well Name
BLACKSPUR HZ LEDUC-WB 16-11-51-2

Operator
BLACKSPUR OIL CORPORATION
Operator's AFE
21DR0012
Signature of Operator Representative
Mike Bowen

Contractor
HORIZON DRILLING, DIV OF WESC
Contractor's Job No
57
Signature of Contractor's Rig Manager
Scott T Compagnon

Tour Sheet Serial Number
K0KC43_20220122_1A

Vendor Software Version
Pason

Year
2022

Month
01

Day
22

Surface Location
14-03-051-02W5

Prov
AB

Loc Type
DLS

Unique Well Id
100/16-11-051-02W5/00

Rig No
43

Well Type
HORIZ

Spud Date Time
2022/01/19 16:00

Rig Release Date Time

Re-Entry
☐

1) Daily Walk Around Inspection
2) Detailed Inspection - Weekly (Using Check List)
3) H2S Signs Posted if Required
4) Well Licence & Stick Diagram Posted
5) Flare Lines Staked
6) BOP Drills Performed
7) Visually Inspected BOPs - Flare Lines & Degasser Lines

1) Rig Site Health & Safety Meeting (one/crew/month)
2) CAOEC Rig Safety Inspection Checklist (one/rig/month)
3) Mast Inspection before Raising or Lowering
4) Crown Saver Checked
5) Motor Kills Checked

OP RM

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1

2

3

4

5

6

7

8

9

10

11</

FRONT PAGE SUMMARY

Licence No
0602001

Well Name
BLACKSPUR HZ LEDUC-WB 16-11-51-2

Operator
BLACKSPUR OIL CORPORATION
Operator's AFE
21DR0012
Signature of Operator Representative
Mike Bowen

Contractor
HORIZON DRILLING, DIV OF WESC
Contractor's Job No
57
Signature of Contractor's Rig Manager
Scott T Compagnon

Rig No
43

Well Type
HORIZ
Spud Date Time
2022/01/19 16:00
Rig Release Date Time

Tour Sheet Serial Number
K0KC43_20220122_1A

Vendor Software Version
Pason

Year
2022

Month
01

Day
22

Surface Location
14-03-051-02W5

Prov
AB

Loc Type
DLS

Unique Well Id
100/16-11-051-02W5/00

Re-Entry
☐

1) Daily Walk Around Inspection
2) Detailed Inspection - Weekly (Using Check List)
3) H2S Signs Posted if Required
4) Well Licence & Stick Diagram Posted
5) Flare Lines Staked
6) BOP Drills Performed
7) Visually Inspected BOPs - Flare Lines & Degasser Lines

1) Rig Site Health & Safety Meeting (one/crew/month)
2) CAOEC Rig Safety Inspection Checklist (one/rig/month)
3) Mast Inspection before Raising or Lowering
4) Crown Saver Checked
5) Motor Kills Checked

CAOEC
CANADIAN ASSOCIATION
OF ENERGY CONTRACTORS

pason

Pason

CODE

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

Kelly Boring
Rig

Op Fuel

HOURLS

Rig Up

Drill Actual

Reaming

Coring

Cond Mud & Circ

Trips

Rig Service

Repair Rig

Cut Off Drill Line

Dev Survey

Wireline Logs

Run Csg & Cement

Wait On Cement

Nipple Up BOP

Test BOP

Drillstem Test

Plug Back

Squeeze Cement

Fishing

Dir Work

Safety Meeting

Tear Down

Waiting On

Rig Watch

Other

TOTAL

Tour 1

Tour 2

Tour 3

Total

5.00

3.50

8.50

0.50

0.75

0.25

2.50

3.00

5.50

0.25

0.50

8.00

8.00

8.00

24.00

FUEL @ 08:00 HOURS

Time

Temp

Current Conditions

Wind Direction

Wind Strength

Road Condition

TOUR 1

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

00:00

END TIME

08:00

BITS

Bit Number
Size
IADC Code
Manufacturer
Type
Serial No
Jets
Depth Out (m)
Depth In (m)
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
Entry Date

CUTTING STRUCTURE

TI

TO

MDC

LOC

BRG

Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From

To

D-R-C

RPM

WOB

DRILLING ASSEMBLY

No

Component

OD

ID

Length

Drill Pipe

Stands

Drill Pipe

Singles

Kelly Down
Total
Weight of DC
Weight of String

HOLE CONDITION

Hole Drag

Up

Down

Torque at Bottom

Fill on Bottom

MUD RECORD

Mud Type

Water

Oil

Other

Time
Density
Funnel Viscosity
Fluid Loss
pH
Location of Sample
Depth
PVT

CIRCULATION

Pump#

Type

Liner Size

SPM

Pressure

Hours Run

REDUCED PUMP SPEED

Pump No.

Pressure

Strokes/min

Depth

Remarks:

DEVIATION SURVEYS

Time

Depth

Deviation

Direction

Type

06:30

1419.06m

67.7

88

07:00

1428.52m

69.3

88.2

07:15

1437.98m

70.2

87.5

07:30

1447.41m

69.8

87.7

SOLIDS CONTROL

Equipment Name

Hours Run

Intake Density

Over Flow Density

Under Flow Density

MUD MATERIALS ADDED

Product

Amount

Type

Boiler

Boiler #

Hours Run

pH

Stack Temp

TIME LOG

From

To

Elapsed

Code

Details of Operations in Sequence & Remarks

Remarks:

SAFETY

Safety Topic

MEHL

MACP

drilling casing

60.00kdaN

2100kPa

TOUR 2

SIGNATURE OF DRILLER

Tony Campbell

START TIME

08:00

END TIME

16:00

BITS

Bit Number
Size
IADC Code
Manufacturer
Type
Serial No
Jets
Depth Out (m)
Depth In (m)
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
Entry Date

CUTTING STRUCTURE

TI

TO

MDC

LOC

BRG

Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From

To

D-R-C

RPM

WOB

DRILLING ASSEMBLY

No

Component

OD

ID

Length

Drill Pipe

Stands

Drill Pipe

Singles

Kelly Down
Total
Weight of DC
Weight of String

HOLE CONDITION

Hole Drag

Up

Down

Torque at Bottom

Fill on Bottom

MUD RECORD

Mud Type

Water

Oil

Other

Time
Density
Funnel Viscosity
Fluid Loss
pH
Location of Sample
Depth
PVT

CIRCULATION

Pump#

Type

Liner Size

SPM

Pressure

Hours Run

REDUCED PUMP SPEED

Pump No.

Pressure

Strokes/min

Depth

Remarks:

DEVIATION SURVEYS

Time

Depth

Deviation

Direction

Type

13:45

1590.17m

85.7

87.5

14:00

1599m

85.4

87.2

SOLIDS CONTROL

Equipment Name

Hours Run

Intake Density

Over Flow Density

Under Flow Density

MUD MATERIALS ADDED

Product

Amount

Type

Boiler

Boiler #

Hours Run

pH

Stack Temp

TIME LOG

From

To

Elapsed

Code

Details of Operations in Sequence & Remarks

Remarks:

SAFETY

Safety Topic

MEHL

MACP

back reaming

60.00kdaN

2100kPa

TOUR 3

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

16:00

END TIME

24:00

BITS

Bit Number
Size
IADC Code
Manufacturer
Type
Serial No
Jets
Depth Out (m)
Depth In (m)
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
Entry Date

CUTTING STRUCTURE

TI

TO

MDC

LOC

BRG

Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From

To

D-R-C

RPM

WOB

DRILLING ASSEMBLY

No

Component

OD

ID

Length

Drill Pipe

Stands

Drill Pipe

Singles

Kelly Down
Total
Weight of DC
Weight of String

HOLE CONDITION

Hole Drag

Up

Down

Torque at Bottom

Fill on Bottom

MUD RECORD

Mud Type

Water

Oil

Other

Time
Density
Funnel Viscosity
Fluid Loss
pH
Location of Sample
Depth
PVT

CIRCULATION

Pump#

Type

Liner Size

SPM

Pressure

Hours Run

REDUCED PUMP SPEED

Pump No.

Pressure

Strokes/min

Depth

Remarks:

DEVIATION SURVEYS

Time

Depth

Deviation

Direction

Type

SOLIDS CONTROL

Equipment Name

Hours Run

Intake Density

Over Flow Density

Under Flow Density

MUD MATERIALS ADDED

Product

Amount

Type

Boiler

Boiler #

Hours Run

pH

Stack Temp

TIME LOG

From

To

Elapsed

Code

Details of Operations in Sequence & Remarks

Remarks:

SAFETY

Safety Topic

MEHL

MACP

TRIPPING OUT

60.00kdaN

2100kPa

V.1.3

3 of 6

MUD SAMPLE - ADDITIONAL DATA

Tour Sheet Serial No
A0KC43_20220122_1A

Vendor Software Version
Pason

Year
2022

Month
01

Day
22



Pason

[illegible]

MUD SAMPLE REMARKS	

MUD SAMPLE - ADDITIONAL DATA				Tour Sheet Serial No	Vendor Software Version		Year	Month	Day
				A0KC43_20220122_1A	Pason		2022	01	22
License No	Well Name			Surface Location		Prov	Loc Type	Unique Well Id	
0502001	BLACKSPUR HZ LEDUC-WB 16-11-51-2			14-03-051-02W5		AB	DLS	100/16-11-051-02W5/00	
Operator		Contractor			Rig No	Well Type		Re-Entry	
BLACKSPUR OIL CORPORATION		HORIZON DRILLING, DIV OF WESC			43	HORIZ		<input type="checkbox"/>	
Operator's AFE		Contractor's Job No			Spud Date Time				
21DR0012		57			2022/01/19 16:00				
Signature of Operator Representative		Signature of Contractor's Rig Manager			Rig Release Date Time				
Mike Bowen		Scott T Compagnon							

[illegible]

MUD SAMPLE - ADDITIONAL DATA				Tour Sheet Serial No		Vendor Software Version		Year	Month	Day
				A0KC43_20220122_1A		Pason		2022	01	22
License No	Well Name			Surface Location			Prov	Loc Type	Unique Well Id	
0502001	BLACKSPUR HZ LEDUC-WB 16-11-51-2			14-03-051-02W5			AB	DLS	100/16-11-051-02W5/00	
Operator			Contractor				Rig No	Well Type		Re-Entry
BLACKSPUR OIL CORPORATION			HORIZON DRILLING, DIV OF WESC				43	HORIZ		<input type="checkbox"/>
Operator's AFE			Contractor's Job No				Spud Date Time			
21DR0012			57				2022/01/19 16:00			
Signature of Operator Representative			Signature of Contractor's Rig Manager				Rig Release Date Time			
Mike Bowen			Scott T Compagnon							



Pason

TOUR		3	MUD TYPE	polymer				WATER	x	OIL		OTHER					
	Time	23:00															
	Density	1060kg/m3															
	Funnel Viscosity	76s/l															
	Fluid Loss	6cm3															
	Fluid pH	12															
	Location of Sample	SHAKERS															
	Depth	701m															
	PVT	19m3															
Test 1	Type (Ex: Chlorides)																
	Value																
Test 2	Type (ex: Sand%)																
	Value																
Test 3	Type (ex: Hard Ca)																
	Value																
Test 4	Type (ex: Sulfides)																
	Value																

MUD SAMPLE REMARKS																	

FRONT PAGE SUMMARY

License No
0602001

Well Name
BLACKSPUR HZ LEDUC-WB 16-11-51-2

Operator
BLACKSPUR OIL CORPORATION
Operator's AFE
21DR0012
Signature of Operator Representative
Mike Bowen

Contractor
HORIZON DRILLING, DIV OF WESC
Contractor's Job No
57
Signature of Contractor's Rig Manager
Scott T Compagnon

Rig No
43

Well Type
HORIZ
Spud Date Time
2022/01/19 16:00
Rig Release Date Time

Vendor Software Version
Pason

Year
2022

Month
01

Day
23

Surface Location
14-03-051-02W5

Prov
AB

Loc Type
DLS

Unique Well Id
10016-11-051-02W5/00

DAILY CHECKS

1) Daily Walk Around Inspection

2) Detailed Inspection - Weekly (Using Check List)

3) H2S Signs Posted if Required

4) Well Licence & Stick Diagram Posted

5) Flare Lines Staked

6) BOP Drills Performed

7) Visually Inspected BOPs - Flare Lines & Degasser Lines

1) Rig Site Health & Safety Meeting (one/crew/month)

2) CAOEC Rig Safety Inspection Checklist (one/rig/month)

3) Mast Inspection before Raising or Lowering

4) Crown Saver Checked

5) Motor Kills Checked

OP RM

MB

SC

MB

SC

MB

SC

MB

SC

SC

CAOEC

CANADIAN ASSOCIATION
OF ENERGY CONTRACTORS

pason

Pason

CODE

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

FUEL @ 08:00 HOURS

Rig
8954.00

Rate
9089.00

HOURS

Rig Up

Drill Actual

Reaming

Coring

Cond Mud & Circ

Trips

Rig Service

Repair Rig

Cut Off Drill Line

Dev Survey

Wireline Logs

Run Csg & Cement

Wait On Cement

Nipple Up BOP

Test BOP

Drillstem Test

Plug Back

Squeeze Cement

Fishing

Dir Work

Safety Meeting

Tear Down

Waiting On

Rig Watch

Other

TOTAL

Tour 1

Tour 2

Tour 3

Total

1.25

6.50

0.25

2.00

3.25

6.75

6.25

1.00

1.00

8.00

8.00

8.00

24.00

WEATHER

Temp
06.00

Wind Speed
OVERCAST

Road Condition
VERY POOR

TOUR 1

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

00:00

END TIME

08:00

BITS

Bit Number
2
Size
222
IADC Code
Manufacturer
Type
GTD5ARM
Serial No
13636522
Jets
10.3 10.3 10.3 10.3
10.3 10.3 10.3 10.3
Depth Out (m)
Depth In (m)
271
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
0.00
Entry Date
2022/01/20

CUTTING STRUCTURE

TI
TO
MDC
LOC
BRG

Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From

To

D-R-C

RPM

WOB

DRILLING ASSEMBLY

No

Component

OD

ID

Length

48

Drill Pipe

Stands

912.61m

0

Drill Pipe

Singles

0.00m

Kelly Down
Total
1615.00m
Weight of DC
3kdaN
Weight of String
46kdaN

HOLE CONDITION

Hole Drag

Up

Down

Torque at Bottom

Fill on Bottom

MUD RECORD

Mud Type

Water

Oil

Time

03:00

Density

1060

Funnel Viscosity

78s/l

Fluid Loss

6cm3

pH

12

Location of Sample

shakers

Depth

1615m

PVT

25.6m3

CIRCULATION

Pump#

Type

Liner Size

SPM

Pressure

Hours Run

1

COMBINED

152

62

12000

4

2

COMBINED

152

62

12000

4

Remarks:

DEVIATION SURVEYS

Time

Depth

Deviation

Direction

Type

SOLIDS CONTROL

Equipment Name

Hours Run

Intake Density

Over Flow Density

Under Flow Density

MUD MATERIALS ADDED

Product

Amount

Type

BARITE

42

sacks

Boiler

Boiler #

Hours Run

pH

Stack Temp

1

8

10.5

255

TIME LOG

From

To

Elapsed

Code

Details of Operations in Sequence & Remarks

00:00

02:15

2.25

8A

Trip in hole, ream @ 1026m, 1365m, and wash down from 1510m to 1615m

02:15

03:30

1.25

5

Circulate hole clean

03:30

06:30

3.00

8B

Trip out of hole, flow check @ 1366m, 796m

06:30

06:45

0.25

21

crew change handover meeting

06:45

08:00

1.25

8B

continue to trip out of hole

TOUR 2

SIGNATURE OF DRILLER

Tony Campbell

START TIME

08:00

END TIME

16:00

BITS

Bit Number
2
Size
222
IADC Code
Manufacturer
Type
GTD5ARM
Serial No
13636522
Jets
10.3 10.3 10.3 10.3
10.3 10.3 10.3 10.3
Depth Out (m)
Depth In (m)
271
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
0.00
Entry Date
2022/01/20

CUTTING STRUCTURE

TI
TO
MDC
LOC
BRG

Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From

To

D-R-C

RPM

WOB

DRILLING ASSEMBLY

No

Component

OD

ID

Length

Drill Pipe

Stands

Drill Pipe

Singles

Kelly Down
Total
Weight of DC
Weight of String

HOLE CONDITION

Hole Drag

Up

Down

Torque at Bottom

Fill on Bottom

MUD RECORD

Mud Type

Water

Oil

Time

03:00

Density

1060

Funnel Viscosity

78s/l

Fluid Loss

6cm3

pH

12

Location of Sample

shakers

Depth

1615m

PVT

25.6m3

CIRCULATION

Pump#

Type

Liner Size

SPM

Pressure

Hours Run

1

COMBINED

152

62

12000

4

2

COMBINED

152

62

12000

4

Remarks:

DEVIATION SURVEYS

Time

Depth

Deviation

Direction

Type

SOLIDS CONTROL

Equipment Name

Hours Run

Intake Density

Over Flow Density

Under Flow Density

MUD MATERIALS ADDED

Product

Amount

Type

BARITE

42

sacks

Boiler

Boiler #

Hours Run

pH

Stack Temp

1

8

10.5

255

TIME LOG

From

To

Elapsed

Code

Details of Operations in Sequence & Remarks

08:00

08:15

0.25

8B

Trip out of hole flow check @ 40m, 0m , trip record calc.=6.29m3, meas.=8.01m3, diff.= 1.72m3

08:15

08:30

0.25

21

Safety meeting with dir. hands

08:30

09:30

1.00

20

Directional work , l/d dir. tools

09:30

10:15

0.75

12A

Rig up/clean floor to run casing

10:15

10:30

0.25

21

Safety meeting with power tong operator

10:30

16:00

5.50

12B

Run casing to 996m

TOUR 3

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

16:00

END TIME

24:00

BITS

Bit Number
2
Size
222
IADC Code
Manufacturer
Type
GTD5ARM
Serial No
13636522
Jets
10.3 10.3 10.3 10.3
10.3 10.3 10.3 10.3
Depth Out (m)
Depth In (m)
271
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
0.00
Entry Date
2022/01/20

CUTTING STRUCTURE

TI
TO
MDC
LOC
BRG

Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From

To

D-R-C

RPM

WOB

DRILLING ASSEMBLY

No

Component

OD

ID

Length

Drill Pipe

Stands

Drill Pipe

Singles

Kelly Down
Total
Weight of DC
Weight of String

HOLE CONDITION

Hole Drag

Up

Down

Torque at Bottom

Fill on Bottom

MUD RECORD

Mud Type

Water

Oil

Time

03:00

Density

1060

Funnel Viscosity

78s/l

Fluid Loss

6cm3

pH

12

Location of Sample

shakers

Depth

1615m

PVT

25.6m3

CIRCULATION

Pump#

Type

Liner Size

SPM

Pressure

Hours Run

1

COMBINED

114

0

4000

0

2

COMBINED

114

120

4000

6

Remarks:

DEVIATION SURVEYS

Time

Depth

Deviation

Direction

Type

SOLIDS CONTROL

Equipment Name

Hours Run

Intake Density

Over Flow Density

Under Flow Density

MUD MATERIALS ADDED

Product

Amount

Type

BARITE

42

sacks

Boiler

Boiler #

Hours Run

pH

Stack Temp

1

8

10.5

255

TIME LOG

From

To

Elapsed

Code

Details of Operations in Sequence & Remarks

16:00

16:15

0.25

5D

Circulate bottoms up

16:15

18:30

2.25

12B

Run casing to 1320m

18:30

18:45

0.25

21

crew hand over, safety meeting with tong hand

18:45

22:15

3.50

12B

Run casing, wash in from 1320m to 1615m

22:15

24:00

1.75

5

Condition mud & circulate

V.1.3

1 of 1

FRONT PAGE SUMMARY

Licence No
0602001

Well Name
BLACKSPUR HZ LEDUC-WB 16-11-51-2

Operator
BLACKSPUR OIL CORPORATION
Operator's AFE
21DR0012

Signature of Operator Representative
Mike Bowen

Tour Sheet Serial Number
K0KC43_20220124_1A

Surface Location
14-03-051-02W5

Vendor Software Version
Pason

Prov
AB

Loc Type
DLS

Unique Well Id
100/16-11-051-02W5/00

Year
2022

Month
01

Day
24

DAILY CHECKS

1) Daily Walk Around Inspection

2) Detailed Inspection - Weekly (Using Check List)

3) H2S Signs Posted if Required

4) Well Licence & Stick Diagram Posted

5) Flare Lines Staked

6) BOP Drills Performed

7) Visually Inspected BOPs - Flare Lines & Degasser Lines

1) Rig Site Health & Safety Meeting (one/crew/month)

2) CAOEC Rig Safety Inspection Checklist (one/rig/month)

3) Mast Inspection before Raising or Lowering

4) Down Saver Checked

5) Motor Kills Checked

OP RM

MB

SC

MB

SC

MB

SC

MB

SC

SC

CAOEC

CANADIAN ASSOCIATION OF ENERGY CONTRACTORS

pason

Pason

CODE

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

Kelly Busting
6.5

Op Fuel
8746.00

FUEL @ 08:00 HOURS

Rig
13905.00

Time
06:00

Temp
2.30

HOURS

Rig Up

Drill Actual

Reaming

Coring

Cond Mud & Circ

Trips

Rig Service

Repair Rig

Cut Off Drillg Line

Dev Survey

Wireline Logs

Run Csg & Cement

Wait On Cement

Nipple Up BOP

Test BOP

Drillstem Test

Plug Back

Squeeze Cement

Fishing

Dir Work

Safety Meeting

Tear Down

Waiting On

Rig Watch

Other

TOTAL

Tour 1

Tour 2

Tour 3

Total

TOUR 1

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

00:00

END TIME

08:00

BITS

Bit Number
Size
IADC Code
Manufacturer
Type
Serial No
Jets
Depth Out (m)
Depth In (m)
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
Entry Date

CUTTING STRUCTURE

TI

TO

MDC

LOC

BRG

Gage

ODC

Reason Pulled

Total Run (m/hr)

METRES DRILLED

From

To

D-R-C

RPM

WOB

DRILLING ASSEMBLY

No

Component

OD

ID

Length

Drill Pipe

Stands

Drill Pipe

Singles

Kelly Down

Total

Weight of DC

Weight of String

HOLE CONDITION

Hole Drag

Up

Down

Torque at Bottom

Fill on Bottom

MUD RECORD

Mud Type

Water

Oil

Time

Density

Funnel Viscosity

Fluid Loss

pH

Location of Sample

Depth

PVT

CIRCULATION

Pump#

Type

Liner Size

SPM

Pressure

Hours Run

1 SINGLE

114

0

4000

0

2 SINGLE

114

120

4000

25

Remarks:

REDUCED PUMP SPEED

Pump No.

Pressure

Strokes/min

Depth

@

@

@

@

DEVIATION SURVEYS

Time

Depth

Deviation

Direction

Type

SOLIDS CONTROL

Equipment Name

Hours Run

Intake Density

Over Flow Density

Under Flow Density

MUD MATERIALS ADDED

Product

Amount

Type

PH DROP

16

pail

Boiler

Boiler #

Hours Run

pH

Stack Temp

1

8

10.5

220

TIME LOG

From

To

Elapsed

Code

Details of Operations in Sequence & Remarks

00:00

00:15

0.25

21

Safety meeting with centermen

00:15

02:30

2.25

12C

Rig in centermen and Cement w/ Trican. Pump 1m3 Optimum Flush. Pressure test to 36MPa. Pump 2m3 Optimum Flush at 1160kg/m3 containing 5Kg/m3 Optimum Flush + 36L/m3 MW-2W Mud Wash. Pump 3m3 (1.42) Scavenger. Titanium 1400-S @ 1300Kg/m3 with 2% OGC-60 + 4% AFA-7. Pump 23.2m3 (14.57t) lead cement Titanium 1400-S @ 1400Kg/m3 with 2% OGC-60 + 4% AFA-7. Pump 17.04m3 tail cement at 1600 kg/m3 (16t) T.A.C.-S with 0.2% AFA-7 + 0.4% TWR-4 + 0.5% Gel + 0.2% TDH-2 + 0.2% CFR-12. Drop plug. Displace w/ 32.86m3 fresh water. Bump plug @ 5 MPa over circulating pressure and hold for 5 minutes. Bleed back & check floats, floats held with 200L back. 9m3 good cement returns to surface. Plug down @ 01:45. Pressure test the casing to 1.4MPa low & 14MPa high for 11min each

02:30

03:15

0.75

14B

Nipple down BOPs

03:15

03:30

0.25

25

Set casing slips @ 40 dan

03:30

04:30

1.00

14B

cut casing and remove spools

04:30

05:30

1.00

25

Install tubing head

05:30

05:45

0.25

14E

Install crossover spool

05:45

06:30

0.75

14A

Nipple up BOP

Remarks:

visually inspect drill line, draw works, brakes and linkages, dead man anchor, top drive

ft alert horn, crown/ floor savers, anti- collision system , manifold alignment , flare , remote choke

TOUR 2

SIGNATURE OF DRILLER

Tony Campbell

START TIME

08:00

END TIME

16:00

BITS

Bit Number
Size
IADC Code
Manufacturer
Type
Serial No
Jets
Depth Out (m)
Depth In (m)
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
Entry Date

CUTTING STRUCTURE

TI

TO

MDC

LOC

BRG

Gage

ODC

Reason Pulled

Total Run (m/hr)

METRES DRILLED

From

To

D-R-C

RPM

WOB

DRILLING ASSEMBLY

No

Component

OD

ID

Length

Drill Pipe

Stands

Drill Pipe

Singles

Kelly Down

Total

Weight of DC

Weight of String

HOLE CONDITION

Hole Drag

Up

Down

Torque at Bottom

Fill on Bottom

MUD RECORD

Mud Type

Water

Oil

Time

Density

Funnel Viscosity

Fluid Loss

pH

Location of Sample

Depth

PVT

CIRCULATION

Pump#

Type

Liner Size

SPM

Pressure

Hours Run

1 SINGLE

114

100

1000

2

2 SINGLE

114

100

1000

0

Remarks:

REDUCED PUMP SPEED

Pump No.

Pressure

Strokes/min

Depth

@

@

@

@

DEVIATION SURVEYS

Time

Depth

Deviation

Direction

Type

SOLIDS CONTROL

Equipment Name

Hours Run

Intake Density

Over Flow Density

Under Flow Density

MUD MATERIALS ADDED

Product

Amount

Type

UNISTAR

4

sacks

UNIPAC HVD

4

sacks

Boiler

Boiler #

Hours Run

pH

Stack Temp

1

8

10.5

220

TIME LOG

From

To

Elapsed

Code

Details of Operations in Sequence & Remarks

08:00

08:15

0.25

15B

accum. ft start press 2000kpa ann 17 secs to close , 7000loss, pipe rams 5 secs to close 1500kpa loss, hcr 2 secs to open 500kpa loss, 9000kpa remaining , 1min 27secs to recharge , ft motor kill

08:15

08:45

0.50

25

INSTALL WEAR BUSHING

08:45

09:00

0.25

21

Safety meeting with dir. hands

09:00

10:45

1.75

20

Directional work , plu dir. tools

10:45

12:45

2.00

8A

Trip in hole to 950m

12:45

14:30

1.75

8E

Pick up drill pipe to 1501m

14:30

15:30

1.00

8A

Slip/Cut drilling line 8.5m. @ 9112megj

15:30

15:45

0.25

7

Rig Service

15:45

16:00

0.25

21A

hop drill with crew members well secure in 90 sec , discuss crew positions, kick warning signs

Remarks:

visually inspect drill line, draw works, brakes and linkages, dead man anchor, top drive

ft alert horn, crown/ floor savers, anti- collision system , manifold alignment , flare , remote choke

TOUR 3

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

16:00

END TIME

24:00

BITS

Bit Number
Size
IADC Code
Manufacturer
Type
Serial No
Jets
Depth Out (m)
Depth In (m)
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
Entry Date

CUTTING STRUCTURE

TI

TO

MDC

LOC

BRG

Gage

ODC

Reason Pulled

Total Run (m/hr)

METRES DRILLED

From

To

D-R-C

RPM

WOB

DRILLING ASSEMBLY

No

Component

OD

ID

Length

Drill Pipe

Stands

Drill Pipe

Singles

Kelly Down

Total

Weight of DC

Weight of String

HOLE CONDITION

Hole Drag

Up

Down

Torque at Bottom

Fill on Bottom

MUD RECORD

Mud Type

Water

Oil

Time

Density

Funnel Viscosity

Fluid Loss

pH

Location of Sample

Depth

PVT

CIRCULATION

Pump#

Type

Liner Size

SPM

Pressure

Hours Run

1 COMBINED

114

76

13000

8

2 COMBINED

114

76

13000

6

Remarks:

REDUCED PUMP SPEED

Pump No.

Pressure

Strokes/min

Depth

1 1830 @ 31 @ 1865

2 1700 @ 31 @ 1865

@ @ @ @

DEVIATION SURVEYS

Time

Depth

Deviation

Direction

Type

SOLIDS CONTROL

Equipment Name

Hours Run

Intake Density

Over Flow Density

Under Flow Density

centrifuge

8

1020

1010

1890

MUD MATERIALS ADDED

Product

Amount

Type

Boiler

Boiler #

Hours Run

pH

Stack Temp

1

8

10.5

220

TIME LOG

From

To

Elapsed

Code

Details of Operations in Sequence & Remarks

16:00

16:45

0.75

8E

Pick up drill pipe to 1601m

16:45

17:15

0.50

25

drill cement , float and shoe

17:15

17:30

0.25

2

Drill 159mm build section to 1624m

17:30

17:45

0.25

8C

Displace to polymer

17:45

18:30

0.75

2

Drill 159mm build section fr/ 1624m- 1654m

18:30

18:45

0.25

21

crew hand over

18:45

19:00

0.25

2

Drill 159mm section fr/ 1654m to 1663m

19:00

19:15

0.25

21A

BOP drill with night crew, rig manager and companyman

19:15

22:00

2.75

2

Drill 159mm lateral section from 1663m to 1865m

22:00

23:45

1.75

20A

Directional surveys, connections, work pipe

23:45

24:00

0.25

7

Rig Service/ function HCR 2 secs to open

Remarks:

visually inspect drill line, draw works, brakes and linkages, dead man anchor, top drive

ft alert horn, crown/ floor savers, anti- collision system , manifold alignment , flare , remote choke

V. 1.3

1 of 7

FRONT PAGE SUMMARY

Licence No
0602001

Well Name
BLACKSPUR HZ LEDUC-WB 16-11-51-2

Operator
BLACKSPUR OIL CORPORATION
Operator's AFE
21DR0012
Signature of Operator Representative
Mike Bowen

Contractor
HORIZON DRILLING, DIV OF WESC
Contractor's Job No
57
Signature of Contractor's Rig Manager
Scott T Compagnon

Rig No
43

Well Type
HORIZ
Spud Date Time
2022/01/19 16:00
Rig Release Date Time

Tour Sheet Serial Number
K0KC43_20220124_1A

Vendor Software Version
Pason

Year
2022

Month
01

Day
24

Surface Location
14-03-051-02W5

Prov
AB

Loc Type
DLS

Unique Well Id
100/16-11-051-02W5/00

Re-Entry
☐

1) Daily Walk Around Inspection
2) Detailed Inspection - Weekly (Using Check List)
3) H2S Signs Posted if Required
4) Well Licence & Stick Diagram Posted
5) Flare Lines Staked
6) BOP Drills Performed
7) Visually Inspected BOPs - Flare Lines & Degasser Lines

1) Rig Site Health & Safety Meeting (one/crew/month)
2) CAOEC Rig Safety Inspection Checklist (one/rig/month)
3) Mast Inspection before Raising or Lowering
4) Crown Saver Checked
5) Motor Kills Checked

CAOEC
CANADIAN ASSOCIATION
OF ENERGY CONTRACTORS

pason

Pason

CODE

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

Kelly Busting
Rig

Op Fuel

HOURS

Tour 1

Tour 2

Tour 3

Total

Rig Up

Drill Actual

Reaming

Coring

Cond Mud & Circ

Trips

Rig Service

Repair Rig

Cut Off Drill Line

Dev Survey

Wireline Logs

Run Csg & Cement

Wait On Cement

Nipple Up BOP

Test BOP

Drillstem Test

Plug Back

Squeeze Cement

Fishing

Dir Work

Safety Meeting

Tear Down

Waiting On

Rig Watch

Other

TOTAL

8.00

8.00

8.00

8.00

8.00

24.00

WEATHER

Time

Temp

Current Conditions

Wind Direction

Wind Strength

Road Condition

TOUR 1

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

00:00

END TIME

08:00

BITS

Bit Number
Size
IADC Code
Manufacturer
Type
Serial No
Jets
Depth Out (m)
Depth In (m)
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
Entry Date

CUTTING STRUCTURE

TI

TO

MDC

LOC

BRG

Gage

ODC

Reason Pulled

Total Run (m/hr)

METRES DRILLED

From

To

D-R-C

RPM

WOB

DRILLING ASSEMBLY

No

Component

OD

ID

Length

Drill Pipe

Stands

Drill Pipe

Singles

Kelly Down

Total

Weight of DC

Weight of String

HOLE CONDITION

Hole Drag

Up

Down

Torque at Bottom

Fill on Bottom

MUD RECORD

Mud Type

Water

Oil

Other

Time

Density

Funnel Viscosity

Fluid Loss

pH

Location of Sample

Depth

PVT

CIRCULATION

Pump#

Type

Liner Size

SPM

Pressure

Hours Run

REDUCED PUMP SPEED

Pump No.

Pressure

Strokes/min

Depth

Remarks:

DEVIATION SURVEYS

Time

Depth

Deviation

Direction

Type

SOLIDS CONTROL

Equipment Name

Hours Run

Intake Density

Over Flow Density

Under Flow Density

MUD MATERIALS ADDED

Product

Amount

Type

Boiler

Boiler #

Hours Run

pH

Stack Temp

TIME LOG

From

To

Elapsed

Code

Details of Operations in Sequence & Remarks

06:30

06:45

0.25

21

Crew change handover meeting

06:45

07:15

0.50

14

install flow t and flow line

07:15

08:00

0.75

15

pressure tested x/o flange 14000kpa high and low

SAFETY

Safety Topic

MEHL

MACP

cementing casing

60.00kdaN

2100kPa

TOUR 2

SIGNATURE OF DRILLER

Tony Campbell

START TIME

08:00

END TIME

16:00

BITS

Bit Number
Size
IADC Code
Manufacturer
Type
Serial No
Jets
Depth Out (m)
Depth In (m)
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
Entry Date

CUTTING STRUCTURE

TI

TO

MDC

LOC

BRG

Gage

ODC

Reason Pulled

Total Run (m/hr)

METRES DRILLED

From

To

D-R-C

RPM

WOB

DRILLING ASSEMBLY

No

Component

OD

ID

Length

Drill Pipe

Stands

Drill Pipe

Singles

Kelly Down

Total

Weight of DC

Weight of String

HOLE CONDITION

Hole Drag

Up

Down

Torque at Bottom

Fill on Bottom

MUD RECORD

Mud Type

Water

Oil

Other

Time

Density

Funnel Viscosity

Fluid Loss

pH

Location of Sample

Depth

PVT

CIRCULATION

Pump#

Type

Liner Size

SPM

Pressure

Hours Run

REDUCED PUMP SPEED

Pump No.

Pressure

Strokes/min

Depth

Remarks:

DEVIATION SURVEYS

Time

Depth

Deviation

Direction

Type

SOLIDS CONTROL

Equipment Name

Hours Run

Intake Density

Over Flow Density

Under Flow Density

MUD MATERIALS ADDED

Product

Amount

Type

Boiler

Boiler #

Hours Run

pH

Stack Temp

TIME LOG

From

To

Elapsed

Code

Details of Operations in Sequence & Remarks

SAFETY

Safety Topic

MEHL

MACP

tripping

30.00kdaN

1000kPa

TOUR 3

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

16:00

END TIME

24:00

BITS

Bit Number
Size
IADC Code
Manufacturer
Type
Serial No
Jets
Depth Out (m)
Depth In (m)
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
Entry Date

CUTTING STRUCTURE

TI

TO

MDC

LOC

BRG

Gage

ODC

Reason Pulled

Total Run (m/hr)

METRES DRILLED

From

To

D-R-C

RPM

WOB

DRILLING ASSEMBLY

No

Component

OD

ID

Length

Drill Pipe

Stands

Drill Pipe

Singles

Kelly Down

Total

Weight of DC

Weight of String

HOLE CONDITION

Hole Drag

Up

Down

Torque at Bottom

Fill on Bottom

MUD RECORD

Mud Type

Water

Oil

Other

Time

Density

Funnel Viscosity

Fluid Loss

pH

Location of Sample

Depth

PVT

CIRCULATION

Pump#

Type

Liner Size

SPM

Pressure

Hours Run

REDUCED PUMP SPEED

Pump No.

Pressure

Strokes/min

Depth

Remarks:

DEVIATION SURVEYS

Time

Depth

Deviation

Direction

Type

SOLIDS CONTROL

Equipment Name

Hours Run

Intake Density

Over Flow Density

Under Flow Density

MUD MATERIALS ADDED

Product

Amount

Type

Boiler

Boiler #

Hours Run

pH

Stack Temp

TIME LOG

From

To

Elapsed

Code

Details of Operations in Sequence & Remarks

SAFETY

Safety Topic

MEHL

MACP

BOP drill

50.00kdaN

11000kPa

V.1.3

2 of 7

DRILL ASSEMBLY & SPECIAL EVENTS - ADDITIONAL DATA

License No

0502001

Well Name

BLACKSPUR HZ LEDUC-WB 16-11-51-2

Operator

BLACKSPUR OIL CORPORATION
Operator's AFE

Signature of Operator Representative

Mike Bowen

Tour Sheet Serial No

A0KC43_20220124_1A

Surface Location

14-03-051-02W5

Contractor

HORIZON DRILLING, DIV OF WESC
Contractor's Job No

Signature of Contractor's Rig Manager

Scott T Compagnon

Vendor Software Version

Pason

Prov

AB

Loc Type

DLS

Unique Well Id

100/16-11-051-02W5/00

Rig No

43

Well Type

HORIZ

Spud Date Time

2022/01/19 16:00

Rig Release Date Time

Re-Entry

☐

Year

2022

Month

01

Day

24



DRILLING ASSEMBLY			TOUR 3		DRILLING ASSEMBLY			TOUR		DRILLING ASSEMBLY			TOUR	
No	Component	OD	ID	Length	No	Component	OD	ID	Length	No	Component	OD	ID	Length
1	BIT	159.00	0.00	0.20										
1	MUD MOTOR	176.00	0.00	8.38										
1	PONY SLICK COLLAR	160.00	70.00	2.88										
1	FLEX NMDC	160.00	69.00	9.33										
1	GAP SUB	163.00	74.00	1.70										
1	FLEX NMDC	160.00	69.00	9.27										
1	X/O	165.00	64.00	1.18										
1	DP(4.5 DS40)	165.00	97.20	9.58										
1	REAMER	165.00	62.00	4.07										
6	DP(4.5 DS40)	165.00	97.20	56.87										
1	JARS-HYD	165.00	0.71	4.00										
66	DP(4.5 DS40)	165.00	97.20	627.55										
1	AGITATOR	165.00	0.00	5.48										
116	DP(4.5 DS40)	165.00	97.20	1132.19										
0	Drill Pipe	Stands		0.00		Drill Pipe	Stands				Drill Pipe	Stands		
0	Drill Pipe	Singles		0.00		Drill Pipe	Singles				Drill Pipe	Singles		
Kelly Down		-7.00			Kelly Down					Kelly Down				
Total		1865.68			Total					Total				
Weight of DC		2.00			Weight of DC					Weight of DC				
Weight of String		38.00			Weight of String					Weight of String				

SPECIAL EVENTS				
Tour No.	Event No.	Description	Time	Depth

MUD SAMPLE - ADDITIONAL DATA

Tour Sheet Serial No

A0KC43_20220124_1A

Vendor Software Version

Pason

Year

2022

Month

01

Day

24

License No

0502001

Well Name

BLACKSPUR HZ LEDUC-WB 16-11-51-2

Surface Location

14-03-051-02W5

Prov

AB

Loc Type

DLS

Unique Well Id

100/16-11-051-02W5/00

Operator

BLACKSPUR OIL CORPORATION

Contractor

HORIZON DRILLING, DIV OF WESC

Rig No

43

Well Type

HORIZ

Re-Entry

☐

Operator's AFE

21DR0012

Contractor's Job No

57

Spud Date Time

2022/01/19 16:00

Signature of Operator Representative

Mike Bowen

Signature of Contractor's Rig Manager

Scott T Compagnon

Rig Release Date Time



Pason

TOUR		1	MUD TYPE	SILICATE	WATER					x	OIL		OTHER				
	Time	00:30															
	Density	1050kg/m3															
	Funnel Viscosity	45s/l															
	Fluid Loss	6cm3															
	Fluid pH	12															
	Location of Sample	SHAKERS															
	Depth	1614m															
	PVT	21m3															
Test 1	Type (Ex: Chlorides)																
	Value																
Test 2	Type (ex: Sand%)																
	Value																
Test 3	Type (ex: Hard Ca)																
	Value																
Test 4	Type (ex: Sulfides)																
	Value																

MUD SAMPLE REMARKS

MUD SAMPLE - ADDITIONAL DATA				Tour Sheet Serial No		Vendor Software Version		Year	Month	Day
				A0KC43_20220124_1A		Pason		2022	01	24
License No	Well Name			Surface Location			Prov	Loc Type	Unique Well Id	
0502001	BLACKSPUR HZ LEDUC-WB 16-11-51-2			14-03-051-02W5			AB	DLS	100/16-11-051-02W5/00	
Operator			Contractor				Rig No	Well Type	Re-Entry	
BLACKSPUR OIL CORPORATION			HORIZON DRILLING, DIV OF WESC				43	HORIZ	<input type="checkbox"/>	
Operator's AFE			Contractor's Job No				Spud Date Time			
21DR0012			57				2022/01/19 16:00			
Signature of Operator Representative			Signature of Contractor's Rig Manager				Rig Release Date Time			
Mike Bowen			Scott T Compagnon							



Pason

TOUR		2	MUD TYPE	polymer				WATER	x	OIL		OTHER					
	Time	15:45															
	Density	1000kg/m3															
	Funnel Viscosity	36s/l															
	Fluid Loss																
	Fluid pH																
	Location of Sample	shakers															
	Depth	1615m															
	PVT	30m3															
Test 1	Type (Ex: Chlorides)																
	Value																
Test 2	Type (ex: Sand%)																
	Value																
Test 3	Type (ex: Hard Ca)																
	Value																
Test 4	Type (ex: Sulfides)																
	Value																

MUD SAMPLE REMARKS

MUD SAMPLE - ADDITIONAL DATA				Tour Sheet Serial No	Vendor Software Version	Year	Month	Day	
				A0KC43_20220124_1A	Pason	2022	01	24	
License No	Well Name			Surface Location		Prov	Loc Type	Unique Well Id	
0502001	BLACKSPUR HZ LEDUC-WB 16-11-51-2			14-03-051-02W5		AB	DLS	100/16-11-051-02W5/00	
Operator		Contractor				Rig No	Well Type		Re-Entry
BLACKSPUR OIL CORPORATION		HORIZON DRILLING, DIV OF WESC				43	HORIZ		<input type="checkbox"/>
Operator's AFE		Contractor's Job No				Spud Date Time			
21DR0012		57				2022/01/19 16:00			
Signature of Operator Representative		Signature of Contractor's Rig Manager				Rig Release Date Time			
Mike Bowen		Scott T Compagnon							

[illegible][illegible]

[illegible]

FRONT PAGE SUMMARY

Licence No
0602001

Well Name
BLACKSPUR HZ LEDUC-WB 16-11-51-2

Tour Sheet Serial Number
K0KC43_20220125_1A

Surface Location
14-03-051-02W5

Vendor Software Version
Pason

Prov
AB

Year
2022

Month
01

Day
25

Operator
BLACKSPUR OIL CORPORATION
Operator's AFE
21DR0012
Signature of Operator Representative
Mike Bowen

Contractor
HORIZON DRILLING, DIV OF WESC
Contractor's Job No
57
Signature of Contractor's Rig Manager
Scott T Compagnon

Rig No
43



Well Type
HORIZ
Spud Date Time
2022/01/19 16:00
Rig Release Date Time

Re-Entry
☐

1) Daily Walk Around Inspection
2) Detailed Inspection - Weekly (Using Check List)
3) H2S Signs Posted if Required
4) Well Licence & Stick Diagram Posted
5) Flare Lines Staked
6) BOP Drills Performed
7) Visually Inspected BOPs - Flare Lines & Degasser Lines
8) Rig Site Health & Safety Meeting (one/crew/month)
9) CAOEC Rig Safety Inspection Checklist (one/rig/month)
3) Mast Inspection before Raising or Lowering
4) Crown Saver Checked
5) Motor Kills Checked

OP

RM



Pason

HOURS	CODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	TOTAL	
		Rig Up	Drill Actual	Reaming	Coring	Cond Mud & Circ	Trips	Rig Service	Repair Rig	Cut Off Drill Line	Dev Survey	Wireline Logs	Run Csg & Cement	Wait On Cement	Nipple Up BOP	Test BOP	Drillstem Test	Plug Back	Squeeze Cement	Fishing	Dir Work	Safety Meeting	Tear Down	Waiting On	Rig Watch	Other		
	Tour 1		4.50					0.25													3.00	0.25					8.00	
	Tour 2		4.75					0.25													3.00						8.00	
	Tour 3		3.50					0.25													4.00	0.25					8.00	
	Total		12.75					0.75													10.00	0.50					24.00	

Kelly Busting

Up Fast

FUEL @ 08:00 HOURS

Rig

Water

WEATHER

Time

Temp

Current Conditions

Wind Direction

Wind Strength

Road Condition

TOUR 1

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

00:00

END TIME

08:00

BITS

Bit Number
Size
IADC Code
Manufacturer
Type
Serial No
Jets
Depth Out (m)
Depth In (m)
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
Entry Date

DRILLING ASSEMBLY

No Component OD ID Length
Drill Pipe Stands
Drill Pipe Singles
Kelly Down
Total
Weight of DC
Weight of String

MUD RECORD

Mud Type Water Oil
Other
Time
Density
Funnel Viscosity
Fluid Loss
pH
Location of Sample
Depth
PVT
CIRCULATION
Pump# Type Liner Size SPM Pressure Hours Run
Remarks:

DEVIATION SURVEYS

Time Depth Deviation Direction Type
02:45 1934.94m 90.5 63.9
03:15 1944.34m 91.8 62
03:45 1953.98m 91.7 60
04:30 1963.65m 91 57.9
05:00 1973.13m 90.5 56.6
05:45 1992.34m 89.8 54
06:00 2011.43m 89.1 53.9
SOLIDS CONTROL
Equipment Name Hours Run Intake Density Over Flow Density Under Flow Density
MUD MATERIALS ADDED
Product Amount Type
Boiler
Boiler # Hours Run pH Stack Temp

TIME LOG

From To Elapsed Code
Details of Operations in Sequence & Remarks
Remarks:

CUTTING STRUCTURE

TI TO MDC LOC BRG
Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From To D-R-C RPM WOB

HOLE CONDITION

Hole Drag Up Down
Torque at Bottom
Fill on Bottom

REDUCED PUMP SPEED

Pump No. Pressure Strokes/min Depth
@ @ @ @

TOUR 2

SIGNATURE OF DRILLER

Tony Campbell

START TIME

08:00

END TIME

16:00

BITS

Bit Number
Size
IADC Code
Manufacturer
Type
Serial No
Jets
Depth Out (m)
Depth In (m)
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
Entry Date

DRILLING ASSEMBLY

No Component OD ID Length
Drill Pipe Stands
Drill Pipe Singles
Kelly Down
Total
Weight of DC
Weight of String

MUD RECORD

Mud Type Water Oil
Other
Time
Density
Funnel Viscosity
Fluid Loss
pH
Location of Sample
Depth
PVT
CIRCULATION
Pump# Type Liner Size SPM Pressure Hours Run
Remarks:

DEVIATION SURVEYS

Time Depth Deviation Direction Type
11:30 2221.09m 91.1 49.9
11:45 2240.14m 90.7 50.5
12:00 2259.13m 90.2 50.4
12:15 2278.18m 90 50.2
12:30 2297.15m 90.2 50.2
12:45 2316.22m 90.1 49.6
13:15 2335.11m 90.2 49.3
SOLIDS CONTROL
Equipment Name Hours Run Intake Density Over Flow Density Under Flow Density
MUD MATERIALS ADDED
Product Amount Type
Boiler
Boiler # Hours Run pH Stack Temp

TIME LOG

From To Elapsed Code
Details of Operations in Sequence & Remarks
Remarks:

CUTTING STRUCTURE

TI TO MDC LOC BRG
Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From To D-R-C RPM WOB

HOLE CONDITION

Hole Drag Up Down
Torque at Bottom
Fill on Bottom

REDUCED PUMP SPEED

Pump No. Pressure Strokes/min Depth
@ @ @ @

TOUR 3

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

16:00

END TIME

24:00

BITS

Bit Number
Size
IADC Code
Manufacturer
Type
Serial No
Jets
Depth Out (m)
Depth In (m)
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
Entry Date

DRILLING ASSEMBLY

No Component OD ID Length
Drill Pipe Stands
Drill Pipe Singles
Kelly Down
Total
Weight of DC
Weight of String

MUD RECORD

Mud Type Water Oil
Other
Time
Density
Funnel Viscosity
Fluid Loss
pH
Location of Sample
Depth
PVT
CIRCULATION
Pump# Type Liner Size SPM Pressure Hours Run
Remarks:

DEVIATION SURVEYS

Time Depth Deviation Direction Type
19:45 2601.41m 90.2 49.6
20:15 2620.51m 89.9 50
20:45 2639.57m 89.9 49
21:30 2658.7m 90.5 47.8
21:45 2677.63m 91.1 48.1
22:15 2696.54m 91.2 48.7
22:45 2715.6m 90 47.9
SOLIDS CONTROL
Equipment Name Hours Run Intake Density Over Flow Density Under Flow Density
MUD MATERIALS ADDED
Product Amount Type
Boiler
Boiler # Hours Run pH Stack Temp

TIME LOG

From To Elapsed Code
Details of Operations in Sequence & Remarks
Remarks:

CUTTING STRUCTURE

TI TO MDC LOC BRG
Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From To D-R-C RPM WOB

HOLE CONDITION

Hole Drag Up Down
Torque at Bottom
Fill on Bottom

REDUCED PUMP SPEED

Pump No. Pressure Strokes/min Depth
@ @ @ @

V.1.3

2 of 7

FRONT PAGE SUMMARY

Licence No
0602001

Well Name
BLACKSPUR HZ LEDUC-WB 16-11-51-2

Operator
BLACKSPUR OIL CORPORATION
Operator's AFE
21DR0012
Signature of Operator Representative
Mike Bowen

Contractor
HORIZON DRILLING, DIV OF WESC
Contractor's Job No
57
Signature of Contractor's Rig Manager
Scott T Compagnon

Rig No
43

Well Type
HORIZ
Spud Date Time
2022/01/19 16:00
Rig Release Date Time

Tour Sheet Serial Number
K0KC43_20220125_1A

Vendor Software Version
Pason

Year
2022

Month
01

Day
25

Surface Location
14-03-051-02W5

Prov
AB

Loc Type
DLS

Unique Well Id
100/16-11-051-02W5/00

DAILY CHECKS

1) Daily Walk Around Inspection

2) Detailed Inspection - Weekly (Using Check List)

3) H2S Signs Posted if Required

4) Well Licence & Stick Diagram Posted

5) Flare Lines Staked

6) BOP Drills Performed

7) Visually Inspected BOPs - Flare Lines & Degasser Lines

1) Rig Site Health & Safety Meeting (one/crew/month)

2) CAOEC Rig Safety Inspection Checklist (one/rig/month)

3) Mast Inspection before Raising or Lowering

4) Crown Saver Checked

5) Motor Kills Checked

OP

RM

CAOEC

CANADIAN ASSOCIATION
OF ENERGY CONTRACTORS

pason

Pason

CODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	TOTAL		FUEL @ 08:00 HOURS	
	Rig Up	Drill Actual	Reaming	Coring	Cond Mud & Circ	Trips	Rig Service	Repair Rig	Cut Off Drill Line	Dev Survey	Wireline Logs	Run Csg & Cement	Wait On Cement	Nipple Up BOP	Test BOP	Drillstem Test	Plug Back	Squeeze Cement	Fishing	Dir Work	Safety Meeting	Tear Down	Waiting On	Rig Watch	Other			Rig	Time
Tour 1		4.50					0.25													3.00	0.25					8.00			
Tour 2		4.75					0.25													3.00						8.00			
Tour 3		3.50					0.25													4.00	0.25					8.00			
Total		12.75					0.75													10.00	0.50					24.00			

TOUR 1

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

00:00

END TIME

08:00

BITS

Bit Number
Size
IADC Code
Manufacturer
Type
Serial No
Jets
Depth Out (m)
Depth In (m)
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
Entry Date

DRILLING ASSEMBLY

No Component OD ID Length
Drill Pipe Stands
Drill Pipe Singles
Kelly Down
Total
Weight of DC
Weight of String

HOLE CONDITION

Hole Drag Up Down
Torque at Bottom
Fill on Bottom

MUD RECORD

Mud Type Water Oil
Other
Time
Density
Funnel Viscosity
Fluid Loss
pH
Location of Sample
Depth
PVT
CIRCULATION
Pump# Type Liner Size SPM Pressure Hours Run
Remarks:

REDUCED PUMP SPEED

Pump No. Pressure Strokes/min Depth
@ @
@ @
@ @

DEVIATION SURVEYS

Time Depth Deviation Direction Type
06:30 2030.49m 89.8 52.2
07:00 2049.59m 88.6 50.9
07:30 2068.76m 88.4 50
SOLIDS CONTROL
Equipment Name Hours Run Intake Density Over Flow Density Under Flow Density
MUD MATERIALS ADDED
Product Amount Type
Boiler
Boiler # Hours Run pH Stack Temp

TIME LOG

From To Elapsed Code Details of Operations in Sequence & Remarks
Remarks:
SAFETY
Safety Topic MEHL MACP
removing protectors from casing using tiger torch 55.00kdaN 11000kPa

TOUR 2

SIGNATURE OF DRILLER

Tony Campbell

START TIME

08:00

END TIME

16:00

BITS

Bit Number
Size
IADC Code
Manufacturer
Type
Serial No
Jets
Depth Out (m)
Depth In (m)
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
Entry Date

DRILLING ASSEMBLY

No Component OD ID Length
Drill Pipe Stands
Drill Pipe Singles
Kelly Down
Total
Weight of DC
Weight of String

HOLE CONDITION

Hole Drag Up Down
Torque at Bottom
Fill on Bottom

MUD RECORD

Mud Type Water Oil
Other
Time
Density
Funnel Viscosity
Fluid Loss
pH
Location of Sample
Depth
PVT
CIRCULATION
Pump# Type Liner Size SPM Pressure Hours Run
Remarks:

REDUCED PUMP SPEED

Pump No. Pressure Strokes/min Depth
@ @
@ @
@ @

DEVIATION SURVEYS

Time Depth Deviation Direction Type
13:30 2354.15m 90.8 48.6
14:00 2373.12m 90.2 49.3
14:15 2392.01m 90.8 49.2
14:45 2411.06m 91.2 49.3
15:30 2430.03m 90.2 49.9
15:45 2449.13m 90.2 51.2
SOLIDS CONTROL
Equipment Name Hours Run Intake Density Over Flow Density Under Flow Density
MUD MATERIALS ADDED
Product Amount Type
Boiler
Boiler # Hours Run pH Stack Temp

TIME LOG

From To Elapsed Code Details of Operations in Sequence & Remarks
Remarks:
SAFETY
Safety Topic MEHL MACP
tugger use 60.00kdaN 10654kPa

TOUR 3

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

16:00

END TIME

24:00

BITS

Bit Number
Size
IADC Code
Manufacturer
Type
Serial No
Jets
Depth Out (m)
Depth In (m)
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
Entry Date

DRILLING ASSEMBLY

No Component OD ID Length
Drill Pipe Stands
Drill Pipe Singles
Kelly Down
Total
Weight of DC
Weight of String

HOLE CONDITION

Hole Drag Up Down
Torque at Bottom
Fill on Bottom

MUD RECORD

Mud Type Water Oil
Other
Time
Density
Funnel Viscosity
Fluid Loss
pH
Location of Sample
Depth
PVT
CIRCULATION
Pump# Type Liner Size SPM Pressure Hours Run
Remarks:

REDUCED PUMP SPEED

Pump No. Pressure Strokes/min Depth
@ @
@ @
@ @

DEVIATION SURVEYS

Time Depth Deviation Direction Type
23:15 2734.54m 90.2 48.4
23:30 2753.47m 89.8 48.5
SOLIDS CONTROL
Equipment Name Hours Run Intake Density Over Flow Density Under Flow Density
MUD MATERIALS ADDED
Product Amount Type
Boiler
Boiler # Hours Run pH Stack Temp

TIME LOG

From To Elapsed Code Details of Operations in Sequence & Remarks
Remarks:
SAFETY
Safety Topic MEHL MACP
loader operator 60.00kdaN 10400kPa

V.1.3

3 of 7

DRILL ASSEMBLY & SPECIAL EVENTS - ADDITIONAL DATA

Tour Sheet Serial No

Vendor Software Version

Year

Month

Day

License No

Well Name

Surface Location

Prov

Loc Type

Unique Well Id

Operator

Contractor

Rig No

Well Type

Re-Entry

Signature of Operator Representative

Signature of Contractor's Rig Manager

Rig Release Date Time

0502001

BLACKSPUR HZ I EDUC-WB 16-11-51-2

14-03-051-02W5

AB

DLS

100/16-11-051-02W5/00

43

HORIZ

2022/01/19 16:00

BLACKSPUR OIL CORPORATION

HORIZON DRILLING, DIV OF WESC

57

2022/01/19 16:00

21DR0012

Scott T Compagnon

Signature of Operator Representative

Signature of Contractor's Rig Manager

Rig Release Date Time

Mike Bowen

Scott T Compagnon

CAOEC

PASON

DRILLING ASSEMBLY					TOUR 1					DRILLING ASSEMBLY					TOUR 2					DRILLING ASSEMBLY					TOUR 3				
No	Component		OD	ID	Length	No	Component		OD	ID	Length	No	Component		OD	ID	Length	No	Component		OD	ID	Length						
1	BIT		159.00	0.00	0.20	1	BIT		159.00	0.00	0.20	1	BIT		159.00	0.00	0.20	1	BIT		159.00	0.00	0.20						
1	MUD MOTOR		176.00	0.00	8.38	1	MUD MOTOR		176.00	0.00	8.38	1	MUD MOTOR		176.00	0.00	8.38	1	MUD MOTOR		176.00	0.00	8.38						
1	PONY SLICK COLLAR		160.00	70.00	2.88	1	PONY SLICK COLLAR		160.00	70.00	2.88	1	PONY SLICK COLLAR		160.00	70.00	2.88	1	PONY SLICK COLLAR		160.00	70.00	2.88						
1	FLEX NMDC		160.00	69.00	9.33	1	FLEX NMDC		160.00	69.00	9.33	1	FLEX NMDC		160.00	69.00	9.33	1	FLEX NMDC		160.00	69.00	9.33						
1	GAP SUB		163.00	74.00	1.70	1	GAP SUB		163.00	74.00	1.70	1	GAP SUB		163.00	74.00	1.70	1	GAP SUB		163.00	74.00	1.70						
1	FLEX NMDC		160.00	69.00	9.27	1	FLEX NMDC		160.00	69.00	9.27	1	FLEX NMDC		160.00	69.00	9.27	1	FLEX NMDC		160.00	69.00	9.27						
1	X/O		165.00	64.00	1.18	1	X/O		165.00	64.00	1.18	1	X/O		165.00	64.00	1.18	1	X/O		165.00	64.00	1.18						
1	DP(4.5 DS40)		165.00	97.20	9.58	1	DP(4.5 DS40)		165.00	97.20	9.58	1	DP(4.5 DS40)		165.00	97.20	9.58	1	DP(4.5 DS40)		165.00	97.20	9.58						
1	REAMER		165.00	62.00	4.07	1	REAMER		165.00	62.00	4.07	1	REAMER		165.00	62.00	4.07	1	REAMER		165.00	62.00	4.07						
6	DP(4.5 DS40)		165.00	97.20	56.87	6	DP(4.5 DS40)		165.00	97.20	56.87	6	DP(4.5 DS40)		165.00	97.20	56.87	6	DP(4.5 DS40)		165.00	97.20	56.87						
1	JARS-HYD		165.00	0.71	4.00	1	JARS-HYD		165.00	0.71	4.00	1	JARS-HYD		165.00	0.71	4.00	1	JARS-HYD		165.00	0.71	4.00						
66	DP(4.5 DS40)		165.00	97.20	627.55	66	DP(4.5 DS40)		165.00	97.20	627.55	66	DP(4.5 DS40)		165.00	97.20	627.55	66	DP(4.5 DS40)		165.00	97.20	627.55						
1	AGITATOR		165.00	0.00	5.48	1	AGITATOR		165.00	0.00	5.48	1	AGITATOR		165.00	0.00	5.48	1	AGITATOR		165.00	0.00	5.48						
136	DP(4.5 DS40)		165.00	97.20	1295	181	DP(4.5 DS40)		165.00	97.20	1722.64	214	DP(4.5 DS40)		165.00	97.20	2036.46												
0	Drill Pipe			Stands	0.00	0	Drill Pipe			Stands	0.00	0	Drill Pipe			Stands	0.00	0	Drill Pipe			Stands	0.00						
0	Drill Pipe			Singles	0.00	0	Drill Pipe			Singles	0.00	0	Drill Pipe			Singles	0.00	0	Drill Pipe			Singles	0.00						
Kelly Down			-5.00			Kelly Down			-0.13			Kelly Down			-6.55														
Total			2030.49			Total			2463.00			Total			2770.40														
Weight of DC			2.00			Weight of DC			2.00			Weight of DC			2.00														
Weight of String			38.00			Weight of String			37.00			Weight of String			37.00														

SPECIAL EVENTS				
Tour No.	Event No.	Description	Time	Depth

MUD SAMPLE - ADDITIONAL DATA				Tour Sheet Serial No	Vendor Software Version		Year	Month	Day
				A0KC43_20220125_1A	Pason		2022	01	25
License No	Well Name			Surface Location		Prov	Loc Type	Unique Well Id	
0502001	BLACKSPUR HZ LEDUC-WB 16-11-51-2			14-03-051-02W5		AB	DLS	100/16-11-051-02W5/00	
Operator		Contractor				Rig No	Well Type		Re-Entry
BLACKSPUR OIL CORPORATION		HORIZON DRILLING, DIV OF WESC				43	HORIZ		<input type="checkbox"/>
Operator's AFE		Contractor's Job No				Spud Date Time			
21DR0012		57				2022/01/19 16:00			
Signature of Operator Representative		Signature of Contractor's Rig Manager				Rig Release Date Time			
Mike Bowen		Scott T Compagnon							

[illegible][illegible]

MUD SAMPLE - ADDITIONAL DATA

Tour Sheet Serial No
A0KC43_20220125_1A

Vendor Software Version
Pason

Day
25

Pason

[illegible]

MUD SAMPLE REMARKS

MUD SAMPLE - ADDITIONAL DATA				Tour Sheet Serial No		Vendor Software Version		Year	Month	Day
				A0KC43_20220125_1A		Pason		2022	01	25
License No	Well Name			Surface Location			Prov	Loc Type	Unique Well Id	
0502001	BLACKSPUR HZ LEDUC-WB 16-11-51-2			14-03-051-02W5			AB	DLS	100/16-11-051-02W5/00	
Operator				Contractor			Rig No	Well Type		Re-Entry
BLACKSPUR OIL CORPORATION				HORIZON DRILLING, DIV OF WESC			43	HORIZ		<input type="checkbox"/>
Operator's AFE				Contractor's Job No			Spud Date Time			
21DR0012				57			2022/01/19 16:00			
Signature of Operator Representative				Signature of Contractor's Rig Manager			Rig Release Date Time			
Mike Bowen				Scott T Compagnon						



Pason

TOUR		3	MUD TYPE				POLYMER				WATER		x	OIL		OTHER	
	Time	17:00	20:30	23:30													
	Density	1090kg/m3	1100kg/m3	1110kg/m3													
	Funnel Viscosity	36s/l	39s/l	40s/l													
	Fluid Loss	7cm3	8cm3	8cm3													
	Fluid pH	8.5	8	8.5													
	Location of Sample	SHAKERS	SHAKERS	SHAKERS													
	Depth	2488m	2600m	2767m													
	PVT	53m3	51m3	25.9m3													
Test 1	Type (Ex: Chlorides)																
	Value																
Test 2	Type (ex: Sand%)																
	Value																
Test 3	Type (ex: Hard Ca)																
	Value																
Test 4	Type (ex: Sulfides)																
	Value																

MUD SAMPLE REMARKS																	

FRONT PAGE SUMMARY

License No
0602001

Well Name
BLACKSPUR HZ LEDUC-WB 16-11-51-2

Operator
BLACKSPUR OIL CORPORATION
Operator's AFE
21DR0012

Signature of Operator Representative
Mike Bowen

Tour Sheet Serial Number
K0KC43_20220126_1A

Surface Location
14-03-051-02W5

Vendor Software Version
Pason

Prov
AB

Loc Type
DLS

Unique Well Id
100/16-11-051-02W5/00

Year
2022

Month
01

Day
26

OP RM
MB SC
MB SC
MB SC
MB SC

1) Daily Walk Around Inspection

2) Detailed Inspection - Weekly (Using Check List)

3) H2S Signs Posted if Required

4) Well Licence & Stick Diagram Posted

5) Flare Lines Staked

6) BOP Drills Performed

7) Visually Inspected BOPs - Flare Lines & Degasser Lines

1) Rig Site Health & Safety Meeting (one/crew/month)

2) CAOEC Rig Safety Inspection Checklist (one/rig/month)

3) Mast Inspection before Raising or Lowering

4) Crown Saver Checked

5) Motor Kills Checked

CAOEC

CANADIAN ASSOCIATION
OF ENERGY CONTRACTORS

pason

Pason

CODE

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

Hours

Tour 1

Tour 2

Tour 3

Total

Rig Up

Drill Actual

Reaming

Coring

Cond Mud & Circ

Trips

Rig Service

Repair Rig

Cut Off Drill Line

Dev Survey

Wireline Logs

Run Csg & Cement

Wait On Cement

Nipple Up BOP

Test BOP

Drillstem Test

Plug Back

Squeeze Cement

Fishing

Dir Work

Safety Meeting

Tear Down

Waiting On

Rig Watch

Other

TOTAL

159

0.25

0.25

0.25

0.75

8.00

8.00

8.00

24.00

Time

Rate

Temp

Current Conditions

Wind Direction

Wind Strength

Road Condition

WEATHER

06:00

06:00

-0.20

OVERCAST

CALM

GOOD

FUEL @ 08:00 HOURS

TOUR 1

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

00:00

END TIME

08:00

BITS

Bit Number
3

Size
159

IADC Code

Manufacturer
REED

Type
TKC63-B1

Serial No
A253526

Jets
11.1 11.0 11.1 11.1

Depth Out (m)
11.1 11.1

Depth In (m)
1615

Total Drilled (m)
1435

Hrs Run Today
20.00

Cumulative Hrs Run
20.00

Entry Date
2022/01/24

CUTTING STRUCTURE

TI
TO
MDC
LOC
BRG

Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From
2770m

To
3050m

D-R-C
DRILL

RPM
45

WOB
9.5kdaN

DRILLING ASSEMBLY

No
1

Component
BIT

OD
159

ID
0

Length
0.20m

2

MUD MOTOR

176

0

8.38m

3

PONY SLICK COLLAR

160

70

2.88m

4

FLEX NMDC

160

69

9.33m

5

GAP SUB

163

74

1.70m

6

FLEX NMDC

160

69

9.27m

7

X/O

165

64

1.18m

8

DPI (4.5 DS40)

165

97

9.58m

9

REAMER

165

62

4.07m

10

DPI (4.5 DS40)

165

97

56.87m

11

JARS-HYD

165

1

4.00m

12

DPI (4.5 DS40)

165

97

627.55m

13

AGITATOR

165

0

5.48m

14

Drill Pipe

Stands

0.00m

15

Drill Pipe

Singles

0.00m

16

Kelly Down

-2.00m

17

Total

3050.17m

18

Weight of DC

2kdaN

19

Weight of String

39kdaN

MUD RECORD

Mud Type
Water

Oil

Time
01:00 03:00

Density
1100 1100

Funnel Viscosity
41s/l 40s/l

Fluid Loss
8cm3 8cm3

pH
9 9

Location of Sample
SHAKERS SHAKERS

Depth
2830m 2887m

PVT
25m3 28.6m3

CIRCULATION

Pump#
1

Type
COMBINED

Liner Size
114

SPM
76

Pressure
21000

Hours Run
8

2

COMBINED

114

76

21000

8

Remarks:

DEVIATION SURVEYS

Time
00:00 2772.44m

Depth
90.7

Deviation
48.4

Direction
Type

00:30 2791.58m

90.5

48.5

00:45 2810.66m

90.9

48.6

01:15 2828.75m

90.2

48.5

01:45 2848.7m

90.7

49.2

01:45 2858.17m

89.9

49

02:45 2877.02m

91.1

50

SOLIDS CONTROL

Equipment Name
CENTRIFUGE

Hours Run
8

Intake Density
1110

Over Flow Density
10890

Under Flow Density
1880

TIME LOG

From
00:00

To
03:00

Elapsed
3.002

Code
3.5020A

Details of Operations in Sequence & Remarks
Drill 159mm lateral section from 2770m to 3030m
Directional surveys, connections, work pipe
Crew change handover meeting
Drill 159mm lateral section from 3030m 3050m
Rig Service/ function pipe rams 5 secs to close

TOUR 2

SIGNATURE OF DRILLER

Tony Campbell

START TIME

08:00

END TIME

16:00

BITS

Bit Number
3

Size
159

IADC Code

Manufacturer
REED

Type
TKC63-B1

Serial No
A253526

Jets
11.1 11.0 11.1 11.1

Depth Out (m)
11.1 11.1

Depth In (m)
1615

Total Drilled (m)
1769

Hrs Run Today
3.25

Cumulative Hrs Run
23.25

Entry Date
2022/01/24

CUTTING STRUCTURE

TI
TO
MDC
LOC
BRG

Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From
3050m

To
3384m

D-R-C
DRILL

RPM
45

WOB
9.5kdaN

DRILLING ASSEMBLY

No
1

Component
BIT

OD
159

ID
0

Length
0.20m

2

MUD MOTOR

176

0

8.38m

3

PONY SLICK COLLAR

160

70

2.88m

4

FLEX NMDC

160

69

9.33m

5

GAP SUB

163

74

1.70m

6

FLEX NMDC

160

69

9.27m

7

X/O

165

64

1.18m

8

DPI (4.5 DS40)

165

97

9.58m

9

REAMER

165

62

4.07m

10

DPI (4.5 DS40)

165

97

56.87m

11

JARS-HYD

165

1

4.00m

12

DPI (4.5 DS40)

165

97

627.55m

13

AGITATOR

165

0

5.48m

14

Drill Pipe

Stands

0.00m

15

Drill Pipe

Singles

0.00m

16

Kelly Down

-0.46m

17

Total

3384.00m

18

Weight of DC

2kdaN

19

Weight of String

39kdaN

MUD RECORD

Mud Type
Water

Oil

Time
12:45

Density
1080

Funnel Viscosity
41s/l

Fluid Loss
6cm3 8

pH
8

Location of Sample
SHAKERS

Depth
3263m

PVT
40m3

CIRCULATION

Pump#
1

Type
COMBINED

Liner Size
114

SPM
70

Pressure
21100

Hours Run
8

2

COMBINED

114

70

21100

8

Remarks:

DEVIATION SURVEYS

Time
08:30 3104.61m

Depth
88.9

Deviation
49.9

Direction
Type

09:15 3123.54m

90.2

50.1

09:45 3142.54m

90.7

50.3

10:00 3161.57m

90.4

50.2

10:30 3180.56m

90.3

50.4

11:00 3199.67m

89.4

50.1

11:30 3218.55m

88.8

49.5

SOLIDS CONTROL

Equipment Name
CENTRIFUGE

Hours Run
8

Intake Density
1080

Over Flow Density
1060

Under Flow Density
1800

TIME LOG

From
08:00

To
11:15

Elapsed
3.252

Code
4.5020A

Details of Operations in Sequence & Remarks
Drill 159MM lateral section fr/ 3050M- 3384M
Directional surveys, connections, worked pipe
Rig Service ft/ hr 2 secs to open

TOUR 3

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

16:00

END TIME

24:00

BITS

Bit Number
3

Size
159

IADC Code

Manufacturer
REED

Type
TKC63-B1

Serial No
A253526

Jets
11.1 11.0 11.1 11.1

Depth Out (m)
11.1 11.1

Depth In (m)
1615

Total Drilled (m)
2036

Hrs Run Today
3.50

Cumulative Hrs Run
26.75

Entry Date
2022/01/24

CUTTING STRUCTURE

TI
TO
MDC
LOC
BRG

Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From
3384m

To
3651m

D-R-C
DRILL

RPM
45

WOB
9kdaN

DRILLING ASSEMBLY

No
1

Component
BIT

OD
159

ID
0

Length
0.20m

2

MUD MOTOR

176

0

8.38m

3

PONY SLICK COLLAR

160

70

2.88m

4

FLEX NMDC

160

69

9.33m

5

GAP SUB

163

74

1.70m

6

FLEX NMDC

160

69

9.27m

7

X/O

165

64

1.18m

8

DPI (4.5 DS40)

165

97

9.58m

9

REAMER

165

62

4.07m

10

DPI (4.5 DS40)

165

97

56.87m

11

JARS-HYD

165

1

4.00m

12

DPI (4.5 DS40)

165

97

627.55m

13

AGITATOR

165

0

5.48m

14

Drill Pipe

Stands

114.87m

15

Drill Pipe

Singles

0.00m

16

Kelly Down

0.00m

17

Total

3651.17m

18

Weight of DC

2kdaN

19

Weight of String

48kdaN

MUD RECORD

Mud Type
Water

Oil

Time
17:00 20:00

Density
1080 1080

Funnel Viscosity
40s/l 37s/l

Fluid Loss
10cm3 15cm3

pH
8 7

Location of Sample
SHAKERS SHAKERS

Depth
3437m 3554m

PVT
40.6m3 36m3

CIRCULATION

Pump#
1

Type
COMBINED

Liner Size
114

SPM
70

Pressure
21500

Hours Run
8

2

COMBINED

114

70

21500

8

Remarks:

DEVIATION SURVEYS

Time
16:00 3389.36m

Depth
90.6

Deviation
49.1

Direction
Type

16:30 3408.38m

90.3

49.2

17:00 3427.28m

89.6

49.3

17:30 3446.26m

90.8

49.4

18:00 3465.2m

91.1

49.5

18:30 3484.13m

90.5

49.3

18:45 3503.31m

89.2

47.7

SOLIDS CONTROL

Equipment Name
CENTRIFUGE

Hours Run
8

Intake Density
1080

Over Flow Density
1065

Under Flow Density
1900

TIME LOG

From
16:00

To
17:30

Elapsed
1.502

Code
1.502

Details of Operations in Sequence & Remarks
Drill 159mm lateral section fr/ 3384m- 3498m
Directional surveys, connections, worked pipe
crew hand over
Drill 159mm lateral section fr/ 3498m- 3651m
Directional surveys, connections, work pipe
Rig Service/ Function Annular 18 secs to close

V.1.3

1 of 7

FRONT PAGE SUMMARY

Licence No
0602001

Well Name
BLACKSPUR HZ LEDUC-WB 16-11-51-2

Operator
BLACKSPUR OIL CORPORATION
Operator's AFE
21DR0012
Signature of Operator Representative
Mike Bowen

Contractor
HORIZON DRILLING, DIV OF WESC
Contractor's Job No
57
Signature of Contractor's Rig Manager
Scott T Compagnon

Rig No
43

Well Type
HORIZ
Spud Date Time
2022/01/19 16:00
Rig Release Date Time

Re-Entry

Tour Sheet Serial Number
K0KC43_20220126_1A

Vendor Software Version
Pason

Year
2022

Month
01

Day
26

Surface Location
14-03-051-02W5

Prov
AB

Loc Type
DLS

Unique Well Id
100/16-11-051-02W5/00

DAILY CHECKS

1) Daily Walk Around Inspection
2) Detailed Inspection - Weekly (Using Check List)
3) H2S Signs Posted if Required
4) Well Licence & Stick Diagram Posted
5) Flare Lines Staked
6) BOP Drills Performed
7) Visually Inspected BOPs - Flare Lines & Degasser Lines

1) Rig Site Health & Safety Meeting (one/crew/month)
2) CAOEC Rig Safety Inspection Checklist (one/rig/month)
3) Mast Inspection before Raising or Lowering
4) Crown Saver Checked
5) Motor Kills Checked

OP

RM

CAOEC

CANADIAN ASSOCIATION
OF ENERGY CONTRACTORS

pason

Pason

CODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	FUEL @ 08:00 HOURS			
	Rig Up	Drill Actual	Reaming	Coring	Cond Mud & Circ	Trips	Rig Service	Repair Rig	Cut Off Drill Line	Dev Survey	Wireline Logs	Run Csg & Cement	Wait On Cement	Nipple Up BOP	Test BOP	Drillstem Test	Plug Back	Squeeze Cement	Fishing	Dir Work	Safety Meeting	Tear Down	Waiting On	Rig Watch	Other	TOTAL	Rig	Time	Temp
Tour 1		4.00					0.25													3.50	0.25					8.00			
Tour 2		3.25					0.25												4.50							8.00			
Tour 3		3.50					0.25												4.00	0.25						8.00			
Total		10.75					0.75												12.00	0.50						24.00			

Kelly Busting

Up Fast

WEATHER

Rig

Current Conditions

Wind Direction

Wind Strength

Road Condition

TOUR 1

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

00:00

END TIME

08:00

BITS

Bit Number
Size
IADC Code
Manufacturer
Type
Serial No
Jets
Depth Out (m)
Depth In (m)
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
Entry Date

CUTTING STRUCTURE

TI
TO
MDC
LOC
BRG

Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From
To
D-R-C
RPM
WOB

DRILLING ASSEMBLY

No
Component
OD
ID
Length
Drill Pipe
Standards
Drill Pipe
Singles
Kelly Down
Total
Weight of DC
Weight of String

HOLE CONDITION

Hole Drag
Up
Down
Torque at Bottom
Fill on Bottom

MUD RECORD

Mud Type
Water
Oil
Time
Density
Funnel Viscosity
Fluid Loss
pH
Location of Sample
Depth
PVT
CIRCULATION
Pump#
Type
Liner Size
SPM
Pressure
Hours Run
Remarks:

REDUCED PUMP SPEED

Pump No.
Pressure
Strokes/min
Depth
@
@
@

DEVIATION SURVEYS

Time
Depth
Deviation
Direction
Type
03:15 2895.88m 91.1 50.3
03:30 2914.76m 90.5 49.9
04:00 2933.86m 90.4 49.7
04:30 2952.8m 90.1 49.6
05:00 2971.78m 90.8 49.5
05:30 2990.82m 90.7 50
05:45 3009.79m 90.1 50.2
SOLIDS CONTROL
Equipment Name
Hours Run
Intake Density
Over Flow Density
Under Flow Density
MUD MATERIALS ADDED
Product
Amount
Type
Boiler
Boiler #
Hours Run
pH
Stack Temp

TIME LOG

From
To
Elapsed
Code
Details of Operations in Sequence & Remarks

SAFETY

Safety Topic
MEHL
MACP
drilling out of the derrick 55.00kdaN 10400kPa

TOUR 2

SIGNATURE OF DRILLER

Tony Campbell

START TIME

08:00

END TIME

16:00

BITS

Bit Number
Size
IADC Code
Manufacturer
Type
Serial No
Jets
Depth Out (m)
Depth In (m)
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
Entry Date

CUTTING STRUCTURE

TI
TO
MDC
LOC
BRG

Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From
To
D-R-C
RPM
WOB

DRILLING ASSEMBLY

No
Component
OD
ID
Length
Drill Pipe
Standards
Drill Pipe
Singles
Kelly Down
Total
Weight of DC
Weight of String

HOLE CONDITION

Hole Drag
Up
Down
Torque at Bottom
Fill on Bottom

MUD RECORD

Mud Type
Water
Oil
Time
Density
Funnel Viscosity
Fluid Loss
pH
Location of Sample
Depth
PVT
CIRCULATION
Pump#
Type
Liner Size
SPM
Pressure
Hours Run
Remarks:

REDUCED PUMP SPEED

Pump No.
Pressure
Strokes/min
Depth
@
@
@

DEVIATION SURVEYS

Time
Depth
Deviation
Direction
Type
12:00 3237.47m 90 48.8
12:30 3256.45m 91 48.6
13:00 3275.45m 90.7 48.4
13:15 3294.39m 89.9 48.5
14:00 3313.56m 90.6 47.9
14:30 3332.55m 91.8 47.9
15:15 3351.53m 92 48.9
SOLIDS CONTROL
Equipment Name
Hours Run
Intake Density
Over Flow Density
Under Flow Density
MUD MATERIALS ADDED
Product
Amount
Type
Boiler
Boiler #
Hours Run
pH
Stack Temp

TIME LOG

From
To
Elapsed
Code
Details of Operations in Sequence & Remarks

SAFETY

Safety Topic
MEHL
MACP
HOUSEKEEPING 60.00kdaN 10252kPa

TOUR 3

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

16:00

END TIME

24:00

BITS

Bit Number
Size
IADC Code
Manufacturer
Type
Serial No
Jets
Depth Out (m)
Depth In (m)
Total Drilled (m)
Hrs Run Today
Cumulative Hrs Run
Entry Date

CUTTING STRUCTURE

TI
TO
MDC
LOC
BRG

Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From
To
D-R-C
RPM
WOB

DRILLING ASSEMBLY

No
Component
OD
ID
Length
Drill Pipe
Standards
Drill Pipe
Singles
Kelly Down
Total
Weight of DC
Weight of String

HOLE CONDITION

Hole Drag
Up
Down
Torque at Bottom
Fill on Bottom

MUD RECORD

Mud Type
Water
Oil
Time
Density
Funnel Viscosity
Fluid Loss
pH
Location of Sample
Depth
PVT
CIRCULATION
Pump#
Type
Liner Size
SPM
Pressure
Hours Run
Remarks:

REDUCED PUMP SPEED

Pump No.
Pressure
Strokes/min
Depth
@
@
@

DEVIATION SURVEYS

Time
Depth
Deviation
Direction
Type
19:15 3522.3m 89 46.2
20:30 3541.25m 90.5 47.1
21:00 3560.51m 89.2 46.9
21:45 3579.79m 90.7 48.1
22:30 3598.97m 91.4 49.1
23:00 3617.99m 90.8 49.4
23:45 3637.17m 91.7 50.1
SOLIDS CONTROL
Equipment Name
Hours Run
Intake Density
Over Flow Density
Under Flow Density
MUD MATERIALS ADDED
Product
Amount
Type
Boiler
Boiler #
Hours Run
pH
Stack Temp

TIME LOG

From
To
Elapsed
Code
Details of Operations in Sequence & Remarks

SAFETY

Safety Topic
MEHL
MACP
Mixing mud products 95.00kdaN 10000kPa

V.1.3

2 of 7

DRILL ASSEMBLY & SPECIAL EVENTS - ADDITIONAL DATA				Tour Sheet Serial No		Vendor Software Version		Year	Month	Day
				A0KC43_20220126_1A		Pason		2022	01	26
License No	Well Name	Surface Location		Prov	Loc Type	Unique Well Id				
0502001	BLACKSPUR HZ I EDUC-WB 16-11-51-2	14-03-051-02W5		AB	DLS	100/16-11-051-02W5/00				
Operator		Contractor		Rig No	Well Type	Re-Entry				
BLACKSPUR OIL CORPORATION		HORIZON DRILLING, DIV OF WESC		43	HORIZ	<input type="checkbox"/>				
Operator's AFE		Contractor's Job No		Spud Date Time						
21DR0012		57		2022/01/19 16:00						
Signature of Operator Representative		Signature of Contractor's Rig Manager		Rig Release Date Time						
Mike Bowen		Scott T Compagnon								



DRILLING ASSEMBLY					TOUR 1		DRILLING ASSEMBLY					TOUR 2		DRILLING ASSEMBLY					TOUR 3				
No	Component			OD	ID	Length	No	Component			OD	ID	Length	No	Component			OD	ID	Length			
1	BIT			159.00	0.00	0.20	1	BIT			159.00	0.00	0.20	1	BIT			159.00	0.00	0.20			
1	MUD MOTOR			176.00	0.00	8.38	1	MUD MOTOR			176.00	0.00	8.38	1	MUD MOTOR			176.00	0.00	8.38			
1	PONY SLICK COLLAR			160.00	70.00	2.88	1	PONY SLICK COLLAR			160.00	70.00	2.88	1	PONY SLICK COLLAR			160.00	70.00	2.88			
1	FLEX NMDC			160.00	69.00	9.33	1	FLEX NMDC			160.00	69.00	9.33	1	FLEX NMDC			160.00	69.00	9.33			
1	GAP SUB			163.00	74.00	1.70	1	GAP SUB			163.00	74.00	1.70	1	GAP SUB			163.00	74.00	1.70			
1	FLEX NMDC			160.00	69.00	9.27	1	FLEX NMDC			160.00	69.00	9.27	1	FLEX NMDC			160.00	69.00	9.27			
1	X/O			165.00	64.00	1.18	1	X/O			165.00	64.00	1.18	1	X/O			165.00	64.00	1.18			
1	DP(4.5 DS40)			165.00	97.20	9.58	1	DP(4.5 DS40)			165.00	97.20	9.58	1	DP(4.5 DS40)			165.00	97.20	9.58			
1	REAMER			165.00	62.00	4.07	1	REAMER			165.00	62.00	4.07	1	REAMER			165.00	62.00	4.07			
6	DP(4.5 DS40)			165.00	97.20	56.87	6	DP(4.5 DS40)			165.00	97.20	56.87	6	DP(4.5 DS40)			165.00	97.20	56.87			
1	JARS-HYD			165.00	0.71	4.00	1	JARS-HYD			165.00	0.71	4.00	1	JARS-HYD			165.00	0.71	4.00			
66	DP(4.5 DS40)			165.00	97.20	627.55	66	DP(4.5 DS40)			165.00	97.20	627.55	66	DP(4.5 DS40)			165.00	97.20	627.55			
1	AGITATOR			165.00	0.00	5.48	1	AGITATOR			165.00	0.00	5.48	1	AGITATOR			165.00	0.00	5.48			
224	DP(4.5 DS40)			165.00	97.20	2131.68	224	DP(4.5 DS40)			165.00	97.20	2131.68	224	DP(4.5 DS40)			165.00	97.20	2131.68			
19	HWDP (4.5 DS40)			165.00	68.00	180	54	HWDP (4.5 DS40)			165.00	68.00	512.29	70	HWDP (4.5 DS40)			165.00	68.00	664.13			
0	Drill Pipe				Stands		0.00	0	Drill Pipe				Stands		0.00	6	Drill Pipe				Stands		114.87
0	Drill Pipe				Singles		0.00	0	Drill Pipe				Singles		0.00	0	Drill Pipe				Singles		0.00
Kelly Down				-2.00			Kelly Down				-0.46			Kelly Down				0.00					
Total				3050.17			Total				3384.00			Total				3651.17					
Weight of DC				2.00			Weight of DC				2.00			Weight of DC				2.00					
Weight of String				39.00			Weight of String				39.00			Weight of String				48.00					

SPECIAL EVENTS				
Tour No.	Event No.	Description	Time	Depth

MUD SAMPLE - ADDITIONAL DATA				Tour Sheet Serial No		Vendor Software Version		Year	Month	Day
				A0KC43_20220126_1A		Pason		2022	01	26
License No	Well Name			Surface Location			Prov	Loc Type	Unique Well Id	
0502001	BLACKSPUR HZ LEDUC-WB 16-11-51-2			14-03-051-02W5			AB	DLS	100/16-11-051-02W5/00	
Operator				Contractor			Rig No	Well Type		Re-Entry
BLACKSPUR OIL CORPORATION				HORIZON DRILLING, DIV OF WESC			43	HORIZ		<input type="checkbox"/>
Operator's AFE				Contractor's Job No			Spud Date Time			
21DR0012				57			2022/01/19 16:00			
Signature of Operator Representative				Signature of Contractor's Rig Manager			Rig Release Date Time			
Mike Bowen				Scott T Compagnon						



Pason

TOUR		MUD TYPE			WATER		OIL		OTHER							
1		POLYMER			x											
	Time	01:00	03:00	06:00												
	Density	1100kg/m3	1100kg/m3	1100kg/m3												
	Funnel Viscosity	41s/l	40s/l	42s/l												
	Fluid Loss	8cm3	8cm3	7.5cm3												
	Fluid pH	9	9	9												
	Location of Sample	SHAKERS	SHAKERS	SHAKERS												
	Depth	2830m	2887m	3032m												
	PVT	25m3	28.6m3	29m3												
Test 1	Type (Ex: Chlorides)															
	Value															
Test 2	Type (ex: Sand%)															
	Value															
Test 3	Type (ex: Hard Ca)															
	Value															
Test 4	Type (ex: Sulfides)															
	Value															

MUD SAMPLE REMARKS

MUD SAMPLE - ADDITIONAL DATA				Tour Sheet Serial No		Vendor Software Version		Year	Month	Day
				A0KC43_20220126_1A		Pason		2022	01	26
License No	Well Name	Surface Location				Prov	Loc Type	Unique Well Id		
0502001	BLACKSPUR HZ LEDUC-WB 16-11-51-2	14-03-051-02W5				AB	DLS	100/16-11-051-02W5/00		
Operator		Contractor				Rig No	Well Type	Re-Entry		
BLACKSPUR OIL CORPORATION		HORIZON DRILLING, DIV OF WESC				43	HORIZ	<input type="checkbox"/>		
Operator's AFE		Contractor's Job No				Spud Date Time				
21DR0012		57				2022/01/19 16:00				
Signature of Operator Representative		Signature of Contractor's Rig Manager				Rig Release Date Time				
Mike Bowen		Scott T Compagnon								



Pason

TOUR		2	MUD TYPE	POLYMER	WATER					x	OIL		OTHER				
	Time	12:45															
	Density	1080kg/m3															
	Funnel Viscosity	41s/l															
	Fluid Loss	6cm3															
	Fluid pH	8															
	Location of Sample	SHAKERS															
	Depth	3263m															
	PVT	40m3															
Test 1	Type (Ex: Chlorides)																
	Value																
Test 2	Type (ex: Sand%)																
	Value																
Test 3	Type (ex: Hard Ca)																
	Value																
Test 4	Type (ex: Sulfides)																
	Value																

MUD SAMPLE REMARKS																	

MUD SAMPLE - ADDITIONAL DATA				Tour Sheet Serial No	Vendor Software Version	Year	Month	Day	
				A0KC43_20220126_1A	Pason	2022	01	26	
License No	Well Name			Surface Location		Prov	Loc Type	Unique Well Id	
0502001	BLACKSPUR HZ LEDUC-WB 16-11-51-2			14-03-051-02W5		AB	DLS	100/16-11-051-02W5/00	
Operator		Contractor				Rig No	Well Type		Re-Entry
BLACKSPUR OIL CORPORATION		HORIZON DRILLING, DIV OF WESC				43	HORIZ		<input type="checkbox"/>
Operator's AFE		Contractor's Job No				Spud Date Time			
21DR0012		57				2022/01/19 16:00			
Signature of Operator Representative		Signature of Contractor's Rig Manager				Rig Release Date Time			
Mike Bowen		Scott T Compagnon							

[illegible][illegible]

TOUR 3										SIGNATURE OF DRILLER										Gary (Glenn) Gould										START TIME										16:00										END TIME										24:00									
BITS										DRILLING ASSEMBLY										MUD RECORD										DEVIATION SURVEYS										TIME LOG																													
Bit Number 3										No Component OD ID Length										Mud Type Water <input checked="" type="checkbox"/> Oil <input type="checkbox"/>										Time Depth Deviation Direction Type										From To Elapsed Code Details of Operations in Sequence & Remarks																													
Size 159										BIT 159 0 0.20m										Other																				16:00 18:30 2.50 6M Wiper Trip , flow check @ 2819m																													
IADC Code										MUD MOTOR 176 0 8.38m										Time																				18:30 18:45 0.25 21 crew hand over																													
Manufacturer REED										PONY SLICK COLLAR 160 70 2.88m										Density																				18:45 20:15 1.50 6M Wiper Trip Tto shoe, flow check																													
Type TKC63-B1										FLEX NMDC 160 69 9.33m										Funnel Viscosity																				20:15 23:45 3.50 6A Trip in hole, ream doglegs and the turn, trip in to 2550m																													
Serial No A253526										GAP SUB 163 74 1.70m										Fluid Loss																				23:45 24:00 0.25 7 Rig Service/ function pipe rams 4 secs to close																													
Jets 11.1 11.0 11.1 11.1										FLEX NMDC 160 69 9.27m										pH																																																	
11.1 11.1										X/O 165 64 1.18m										Location of Sample																																																	
Depth Out (m) 4088										DPI (4.5 DS40) 163 97 9.58m										Depth																																																	
Depth In (m) 1615										REAMER 163 62 4.07m										PVT																																																	
Total Drilled (m) 2473										DPI (4.5 DS40) 165 97 56.87m										CIRCULATION																																																	
Hrs Run Today										JARS-HYD 165 1 4.00m										Pump# Type Liner Size SPM Pressure Hours Run																																																	
Cumulative Hrs Run 32.50										6 DPI (4.5 DS40) 165 97 627.55m										1 COMBINED 114 70 12000 4																																																	
Entry Date 2022/01/24										AGITATOR 165 0 5.48m										2 COMBINED 114 70 12000 4																																																	
CUTTING STRUCTURE										21 Drill Pipe Stands 400.73m										MUD MATERIALS ADDED																																																	
TI Gage										Drill Pipe Singles 0.00m										Product Amount Type																																																	
TO ODC										Kelly Down -16.57m										UNIPAC LVD 4 sacks																																																	
MDC Reason Pulled										Total 3920.46m										POLYZAN 2 sacks																																																	
LOC Total Run (m/hr) 76.09										Weight of DC 2kdaN										GRAPHITE 5 sacks																																																	
BRG										Weight of String 49kdaN										Remarks:																																																	
METRES DRILLED										HOLE CONDITION										REDUCED PUMP SPEED																																																	
From To D-R-C RPM WOB										Hole Drag Up Down										Pump No. Pressure Strokes/min Depth																																																	
										Torque at Bottom										Boiler																																																	
										Fill on Bottom										@ @ @ @										Boiler # Hours Run pH Stack Temp																																							
																														1 8 10 260										SAFETY																													
																																								Safety Topic MEHL MACP																													
																																								tripping 50.00kdaN 10400kPa																													

DRILL ASSEMBLY & SPECIAL EVENTS - ADDITIONAL DATA				Tour Sheet Serial No		Vendor Software Version		Year	Month	Day
				A0KC43_20220127_1B		Pason		2022	01	27
License No	Well Name	Surface Location		Prov	Loc Type	Unique Well Id				
0502001	BLACKSPUR HZ LEDUC-WB 16-11-51-2	14-03-051-02W5		AB	DLS	100/16-11-051-02W5/00				
Operator		Contractor		Rig No	Well Type	Re-Entry				
BLACKSPUR OIL CORPORATION		HORIZON DRILLING, DIV OF WESC		43	HORIZ	<input type="checkbox"/>				
Operator's AFE		Contractor's Job No		Spud Date Time						
21DR0012		57		2022/01/19 16:00						
Signature of Operator Representative		Signature of Contractor's Rig Manager		Rig Release Date Time						
Mike Bowen		Scott T Compagnon								



DRILLING ASSEMBLY					TOUR 1		DRILLING ASSEMBLY					TOUR 2		DRILLING ASSEMBLY					TOUR 3	
No	Component			OD	ID	Length	No	Component			OD	ID	Length	No	Component			OD	ID	Length
1	BIT			159.00	0.00	0.20	1	BIT			159.00	0.00	0.20	1	BIT			159.00	0.00	0.20
1	MUD MOTOR			176.00	0.00	8.38	1	MUD MOTOR			176.00	0.00	8.38	1	MUD MOTOR			176.00	0.00	8.38
1	PONY SLICK COLLAR			160.00	70.00	2.88	1	PONY SLICK COLLAR			160.00	70.00	2.88	1	PONY SLICK COLLAR			160.00	70.00	2.88
1	FLEX NMDC			160.00	69.00	9.33	1	FLEX NMDC			160.00	69.00	9.33	1	FLEX NMDC			160.00	69.00	9.33
1	GAP SUB			163.00	74.00	1.70	1	GAP SUB			163.00	74.00	1.70	1	GAP SUB			163.00	74.00	1.70
1	FLEX NMDC			160.00	69.00	9.27	1	FLEX NMDC			160.00	69.00	9.27	1	FLEX NMDC			160.00	69.00	9.27
1	X/O			165.00	64.00	1.18	1	X/O			165.00	64.00	1.18	1	X/O			165.00	64.00	1.18
1	DP(4.5 DS40)			165.00	97.20	9.58	1	DP(4.5 DS40)			165.00	97.20	9.58	1	DP(4.5 DS40)			165.00	97.20	9.58
1	REAMER			165.00	62.00	4.07	1	REAMER			165.00	62.00	4.07	1	REAMER			165.00	62.00	4.07
6	DP(4.5 DS40)			165.00	97.20	56.87	6	DP(4.5 DS40)			165.00	97.20	56.87	6	DP(4.5 DS40)			165.00	97.20	56.87
1	JARS-HYD			165.00	0.71	4.00	1	JARS-HYD			165.00	0.71	4.00	1	JARS-HYD			165.00	0.71	4.00
66	DP(4.5 DS40)			165.00	97.20	627.55	66	DP(4.5 DS40)			165.00	97.20	627.55	66	DP(4.5 DS40)			165.00	97.20	627.55
1	AGITATOR			165.00	0.00	5.48	1	AGITATOR			165.00	0.00	5.48	1	AGITATOR			165.00	0.00	5.48
224	DP(4.5 DS40)			165.00	97.20	2131.68	224	DP(4.5 DS40)			165.00	97.20	2131.68	224	DP(4.5 DS40)			165.00	97.20	2131.68
70	HWDP (4.5 DS40)			165.00	68.00	664.13	70	HWDP (4.5 DS40)			165.00	68.00	664.13	70	HWDP (4.5 DS40)			165.00	68.00	664.13
21	Drill Pipe				Stands	400.73	21	Drill Pipe				Stands	400.73	21	Drill Pipe				Stands	400.73
0	Drill Pipe				Singles	0.00	0	Drill Pipe				Singles	0.00	0	Drill Pipe				Singles	0.00
Kelly Down				-16.57		Kelly Down				-16.57		Kelly Down				-16.57				
Total				3920.46		Total				3920.46		Total				3920.46				
Weight of DC				2.00		Weight of DC				2.00		Weight of DC				2.00				
Weight of String				49.00		Weight of String				49.00		Weight of String				49.00				

SPECIAL EVENTS				
Tour No.	Event No.	Description	Time	Depth

MUD SAMPLE - ADDITIONAL DATA

Tour Sheet Serial No

A0KC43_20220127_1B

Vendor Software Version

Pason

Year

2022

Month

01

Day

27

License No

0502001

Well Name

BLACKSPUR HZ LEDUC-WB 16-11-51-2

Surface Location

14-03-051-02W5

Prov

AB

Loc Type

DLS

Unique Well Id

100/16-11-051-02W5/00

Operator

BLACKSPUR OIL CORPORATION

Contractor

HORIZON DRILLING, DIV OF WESC

Rig No

43

Well Type

HORIZ

Re-Entry

☐

Operator's AFE

21DR0012

Contractor's Job No

57

Spud Date Time

2022/01/19 16:00

Signature of Operator Representative

Mike Bowen

Signature of Contractor's Rig Manager

Scott T Compagnon

Rig Release Date Time



Pason

TOUR		MUD TYPE				WATER				OIL		OTHER			
1		POLYMER				x									
	Time	01:00	03:00	06:00	07:15										
	Density	1080kg/m3	1080kg/m3	1080kg/m3	1070kg/m3										
	Funnel Viscosity	40s/l	40s/l	38s/l	35s/l										
	Fluid Loss	15cm3	15cm3	15cm3	15cm3										
	Fluid pH	7	7	7	7										
	Location of Sample	SHAKERS	SHAKERS	shakers	SHAKERS										
	Depth	3679m	3790m	3898m	3937m										
	PVT	34.4m3	31.4m3	38m3	38.3m3										
Test 1	Type (Ex: Chlorides)														
	Value														
Test 2	Type (ex: Sand%)														
	Value														
Test 3	Type (ex: Hard Ca)														
	Value														
Test 4	Type (ex: Sulfides)														
	Value														

MUD SAMPLE REMARKS

MUD SAMPLE - ADDITIONAL DATA

Tour Sheet Serial No

A0KC43_20220127_1B

Vendor Software Version

Pason

Year

2022

Month

01

Day

27

License No

0502001

Well Name

BLACKSPUR HZ LEDUC-WB 16-11-51-2

Surface Location

14-03-051-02W5

Prov

AB

Loc Type

DLS

Unique Well Id

100/16-11-051-02W5/00

Operator

BLACKSPUR OIL CORPORATION

Contractor

HORIZON DRILLING, DIV OF WESC

Rig No

43

Well Type

HORIZ

Re-Entry

☐

Operator's AFE

21DR0012

Contractor's Job No

57

Spud Date Time

2022/01/19 16:00

Signature of Operator Representative

Mike Bowen

Signature of Contractor's Rig Manager

Scott T Compagnon

Rig Release Date Time



Pason

TOUR		2	MUD TYPE				POLYMER				WATER		x	OIL		OTHER					
	Time	11:00																			
	Density	1070kg/m3																			
	Funnel Viscosity	37s/l																			
	Fluid Loss	10cm3																			
	Fluid pH	7																			
	Location of Sample	SHAKERS																			
	Depth	4020m																			
	PVT	36m3																			
Test 1	Type (Ex: Chlorides)																				
	Value																				
Test 2	Type (ex: Sand%)																				
	Value																				
Test 3	Type (ex: Hard Ca)																				
	Value																				
Test 4	Type (ex: Sulfides)																				
	Value																				

MUD SAMPLE REMARKS

FRONT PAGE SUMMARY

License No
0602001

Well Name
BLACKSPUR HZ LEDUC-WB 16-11-51-2

Operator
BLACKSPUR OIL CORPORATION
Operator's AFE
21DR0012

Signature of Operator Representative
Mike Bowen

Tour Sheet Serial Number
K0KC43_20220128_1A

Surface Location
14-03-051-02W5

Vendor Software Version
Pason

Prov
AB

Loc Type
DLS

Unique Well Id
10016-11-051-02W5/00

Year
2022

Month
01

Day
28

Contractor
HORIZON DRILLING, DIV OF WESC
Contractor's Job No
57

Signature of Contractor's Rig Manager
Scott T Compagnon

Rig No
43

Signature of Contractor's Rig Manager
Scott T Compagnon

Well Type
HORIZ

Spud Date Time
2022/01/19 16:00

Rig Release Date Time

Re-Entry
☐

DAILY CHECKS

1) Daily Walk Around Inspection

2) Detailed Inspection - Weekly (Using Check List)

3) H2S Signs Posted if Required

4) Well Licence & Stick Diagram Posted

5) Flare Lines Staked

6) BOP Drills Performed

7) Visually Inspected BOPs - Flare Lines & Degasser Lines

1) Rig Site Health & Safety Meeting (one/crew/month)

2) CAOEC Rig Safety Inspection Checklist (one/rig/month)

3) Mast Inspection before Raising or Lowering

4) Crown Saver Checked

5) Motor Kills Checked

OP RM

MB

SC

MB

SC

MB

SC

MB

SC

SC

CAOEC

CANADIAN ASSOCIATION OF ENERGY CONTRACTORS

pason

Pason

CODE

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

Hours

Tour 1

Tour 2

Tour 3

Total

Rig Up

Drill Actual

Reaming

Coring

Cond Mud & Circ

Trips

Rig Service

Repair Rig

Cut Off Drill Log

Dev Survey

Wireline Logs

Run Csg & Cement

Wait On Cement

Nipple Up BOP

Test BOP

Drillstem Test

Plug Back

Squeeze Cement

Fishing

Dir Work

Safety Meeting

Tear Down

Waiting On

Rig Watch

Other

TOTAL

8.00

8.00

8.00

24.00

Hours

Tour 1

Tour 2

Tour 3

Total

Rig Up

Drill Actual

Reaming

Coring

Cond Mud & Circ

Trips

Rig Service

Repair Rig

Cut Off Drill Log

Dev Survey

Wireline Logs

Run Csg & Cement

Wait On Cement

Nipple Up BOP

Test BOP

Drillstem Test

Plug Back

Squeeze Cement

Fishing

Dir Work

Safety Meeting

Tear Down

Waiting On

Rig Watch

Other

TOTAL

8.00

8.00

8.00

24.00

TOUR 1

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

00:00

END TIME

08:00

BITS

Bit Number
3

Size
159

IADC Code

Manufacturer
REED

Type
TKC63-81

Serial No
A253526

Jets
11.1 11.1 11.1 11.1

Depth Out (m)
11.1 11.1

Depth In (m)
1615

Total Drilled (m)
2473

Hrs Run Today
0.00

Cumulative Hrs Run
32.50

Entry Date
2022/01/14

CUTTING STRUCTURE

TI
TO
MDC
LOC
BRG

Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From
To
D-R-C
RPM
WOB

DRILLING ASSEMBLY

No
Component
OD
ID
Length

1 BIT
159 0 0.20m

1 MUD MOTOR
176 0 8.38m

1 PONY SLICK COLLAR
160 70 2.88m

1 FLEX NMDC
160 69 9.33m

1 GAP SUB
163 74 1.70m

1 FLEX NMDC
160 69 9.27m

1 X/O
165 64 1.18m

1 DPI (4.5 DS40)
165 97 9.58m

1 REAMER
165 62 4.07m

6 DPI (4.5 DS40)
165 97 56.87m

1 JARS-HYD
165 1 4.00m

66 DPI (4.5 DS40)
165 97 627.55m

1 AGITATOR
165 0 5.48m

29 Drill Pipe
Stands
552.52m

0 Drill Pipe
Singles
0.00m

Kelly Down
-0.52m

Total
4088.30m

Weight of DC
2kdaN

Weight of String
49kdaN

HOLE CONDITION

Hole Drag
Up
Down

Torque at Bottom

Fill on Bottom

MUD RECORD

Mud Type
Water
Other

Time
06:00

Density
1070

Funnel Viscosity
45s/l

Fluid Loss
10cm/3

pH
7.5

Location of Sample
SHAKERS

Depth
3661m

PVT
26.5m3

CIRCULATION

Pump#
Type
Liner Size
SPM
Pressure
Hours Run

1 COMBINED
114 129 15000 8

2 COMBINED
114 70 15000 4

REDUCED PUMP SPEED

Pump No.
Pressure
Strokes/min
Depth

@ @ @ @

DEVIATION SURVEYS

Time
Depth
Deviation
Direction
Type

SOLIDS CONTROL

Equipment Name
Hours Run
Intake Density
Over Flow Density
Under Flow Density

CENTRIFUGE
4 1070 1050 1850

MUD MATERIALS ADDED

Product
Amount
Type

Boiler

Boiler #
Hours Run
pH
Stack Temp

1 8 10 260

TIME LOG

From
To
Elapsed
Code
Details of Operations in Sequence & Remarks

00:00 01:30 1.50 8A Trip in hole TO 2900m

01:30 06:30 5.00 3 Reaming from 2900m to 3757m

06:30 06:45 0.25 21 crew change meeting

06:45 07:45 1.00 3 continue to ream in hole

07:45 08:00 0.25 7 Rig Service/ function HCR 2 secs to close

TOUR 1

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

00:00

END TIME

08:00

BITS

Bit Number
3

Size
159

IADC Code

Manufacturer
REED

Type
TKC63-81

Serial No
A253526

Jets
11.1 11.1 11.1 11.1

Depth Out (m)
11.1 11.1

Depth In (m)
1615

Total Drilled (m)
2473

Hrs Run Today
0.00

Cumulative Hrs Run
32.50

Entry Date
2022/01/14

CUTTING STRUCTURE

TI
TO
MDC
LOC
BRG

Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From
To
D-R-C
RPM
WOB

DRILLING ASSEMBLY

No
Component
OD
ID
Length

1 BIT
159 0 0.20m

1 MUD MOTOR
176 0 8.38m

1 PONY SLICK COLLAR
160 70 2.88m

1 FLEX NMDC
160 69 9.33m

1 GAP SUB
163 74 1.70m

1 FLEX NMDC
160 69 9.27m

1 X/O
165 64 1.18m

1 DPI (4.5 DS40)
165 97 9.58m

1 REAMER
165 62 4.07m

6 DPI (4.5 DS40)
165 97 56.87m

1 JARS-HYD
165 1 4.00m

66 DPI (4.5 DS40)
165 97 627.55m

1 AGITATOR
165 0 5.48m

29 Drill Pipe
Stands
552.52m

0 Drill Pipe
Singles
0.00m

Kelly Down
-0.52m

Total
4088.30m

Weight of DC
2kdaN

Weight of String
49kdaN

HOLE CONDITION

Hole Drag
Up
Down

Torque at Bottom

Fill on Bottom

MUD RECORD

Mud Type
Water
Other

Time
06:00

Density
1070

Funnel Viscosity
45s/l

Fluid Loss
10cm/3

pH
7.5

Location of Sample
SHAKERS

Depth
3661m

PVT
26.5m3

CIRCULATION

Pump#
Type
Liner Size
SPM
Pressure
Hours Run

1 COMBINED
114 129 15000 8

2 COMBINED
114 70 15000 4

REDUCED PUMP SPEED

Pump No.
Pressure
Strokes/min
Depth

@ @ @ @

DEVIATION SURVEYS

Time
Depth
Deviation
Direction
Type

SOLIDS CONTROL

Equipment Name
Hours Run
Intake Density
Over Flow Density
Under Flow Density

CENTRIFUGE
4 1070 1050 1850

MUD MATERIALS ADDED

Product
Amount
Type

Boiler

Boiler #
Hours Run
pH
Stack Temp

1 8 10 260

TIME LOG

From
To
Elapsed
Code
Details of Operations in Sequence & Remarks

00:00 01:30 1.50 8A Trip in hole TO 2900m

01:30 06:30 5.00 3 Reaming from 2900m to 3757m

06:30 06:45 0.25 21 crew change meeting

06:45 07:45 1.00 3 continue to ream in hole

07:45 08:00 0.25 7 Rig Service/ function HCR 2 secs to close

TOUR 1

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

00:00

END TIME

08:00

BITS

Bit Number
3

Size
159

IADC Code

Manufacturer
REED

Type
TKC63-81

Serial No
A253526

Jets
11.1 11.1 11.1 11.1

Depth Out (m)
11.1 11.1

Depth In (m)
1615

Total Drilled (m)
2473

Hrs Run Today
0.00

Cumulative Hrs Run
32.50

Entry Date
2022/01/14

CUTTING STRUCTURE

TI
TO
MDC
LOC
BRG

Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From
To
D-R-C
RPM
WOB

DRILLING ASSEMBLY

No
Component
OD
ID
Length

1 BIT
159 0 0.20m

1 MUD MOTOR
176 0 8.38m

1 PONY SLICK COLLAR
160 70 2.88m

1 FLEX NMDC
160 69 9.33m

1 GAP SUB
163 74 1.70m

1 FLEX NMDC
160 69 9.27m

1 X/O
165 64 1.18m

1 DPI (4.5 DS40)
165 97 9.58m

1 REAMER
165 62 4.07m

6 DPI (4.5 DS40)
165 97 56.87m

1 JARS-HYD
165 1 4.00m

66 DPI (4.5 DS40)
165 97 627.55m

1 AGITATOR
165 0 5.48m

29 Drill Pipe
Stands
552.52m

0 Drill Pipe
Singles
0.00m

Kelly Down
-0.52m

Total
4088.30m

Weight of DC
2kdaN

Weight of String
49kdaN

HOLE CONDITION

Hole Drag
Up
Down

Torque at Bottom

Fill on Bottom

MUD RECORD

Mud Type
Water
Other

Time
06:00

Density
1070

Funnel Viscosity
45s/l

Fluid Loss
10cm/3

pH
7.5

Location of Sample
SHAKERS

Depth
3661m

PVT
26.5m3

CIRCULATION

Pump#
Type
Liner Size
SPM
Pressure
Hours Run

1 COMBINED
114 129 15000 8

2 COMBINED
114 70 15000 4

REDUCED PUMP SPEED

Pump No.
Pressure
Strokes/min
Depth

@ @ @ @

DEVIATION SURVEYS

Time
Depth
Deviation
Direction
Type

SOLIDS CONTROL

Equipment Name
Hours Run
Intake Density
Over Flow Density
Under Flow Density

CENTRIFUGE
4 1070 1050 1850

MUD MATERIALS ADDED

Product
Amount
Type

Boiler

Boiler #
Hours Run
pH
Stack Temp

1 8 10 260

TIME LOG

From
To
Elapsed
Code
Details of Operations in Sequence & Remarks

00:00 01:30 1.50 8A Trip in hole TO 2900m

01:30 06:30 5.00 3 Reaming from 2900m to 3757m

06:30 06:45 0.25 21 crew change meeting

06:45 07:45 1.00 3 continue to ream in hole

07:45 08:00 0.25 7 Rig Service/ function HCR 2 secs to close

TOUR 1

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

00:00

END TIME

08:00

BITS

Bit Number
3

Size
159

IADC Code

Manufacturer
REED

Type
TKC63-81

Serial No
A253526

Jets
11.1 11.1 11.1 11.1

Depth Out (m)
11.1 11.1

Depth In (m)
1615

Total Drilled (m)
2473

Hrs Run Today
0.00

Cumulative Hrs Run
32.50

Entry Date
2022/01/14

CUTTING STRUCTURE

TI
TO
MDC
LOC
BRG

Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From
To
D-R-C
RPM
WOB

DRILLING ASSEMBLY

No
Component
OD
ID
Length

1 BIT
159 0 0.20m

1 MUD MOTOR
176 0 8.38m

1 PONY SLICK COLLAR
160 70 2.88m

1 FLEX NMDC
160 69 9.33m

1 GAP SUB
163 74 1.70m

1 FLEX NMDC
160 69 9.27m

1 X/O
165 64 1.18m

1 DPI (4.5 DS40)
165 97 9.58m

1 REAMER
165 62 4.07m

6 DPI (4.5 DS40)
165 97 56.87m

1 JARS-HYD
165 1 4.00m

66 DPI (4.5 DS40)
165 97 627.55m

1 AGITATOR
165 0 5.48m

29 Drill Pipe
Stands
552.52m

0 Drill Pipe
Singles
0.00m

Kelly Down
-0.52m

Total
4088.30m

Weight of DC
2kdaN

Weight of String
49kdaN

HOLE CONDITION

Hole Drag
Up
Down

Torque at Bottom

Fill on Bottom

MUD RECORD

Mud Type
Water
Other

Time
06:00

Density
1070

Funnel Viscosity
45s/l

Fluid Loss
10cm/3

pH
7.5

Location of Sample
SHAKERS

Depth
3661m

PVT
26.5m3

CIRCULATION

Pump#
Type
Liner Size
SPM
Pressure
Hours Run

1 COMBINED
114 129 15000 8

2 COMBINED
114 70 15000 4

REDUCED PUMP SPEED

Pump No.
Pressure
Strokes/min
Depth

@ @ @ @

DEVIATION SURVEYS

Time
Depth
Deviation
Direction
Type

SOLIDS CONTROL

Equipment Name
Hours Run
Intake Density
Over Flow Density
Under Flow Density

CENTRIFUGE
4 1070 1050 1850

MUD MATERIALS ADDED

Product
Amount
Type

Boiler

Boiler #
Hours Run
pH
Stack Temp

1 8 10 260

TIME LOG

From
To
Elapsed
Code
Details of Operations in Sequence & Remarks

00:00 01:30 1.50 8A Trip in hole TO 2900m

01:30 06:30 5.00 3 Reaming from 2900m to 3757m

06:30 06:45 0.25 21 crew change meeting

06:45 07:45 1.00 3 continue to ream in hole

07:45 08:00 0.25 7 Rig Service/ function HCR 2 secs to close

TOUR 1

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

00:00

END TIME

08:00

BITS

Bit Number
3

Size
159

IADC Code

Manufacturer
REED

Type
TKC63-81

Serial No
A253526

Jets
11.1 11.1 11.1 11.1

Depth Out (m)
11.1 11.1

Depth In (m)
1615

Total Drilled (m)
2473

Hrs Run Today
0.00

Cumulative Hrs Run
32.50

Entry Date
2022/01/14

CUTTING STRUCTURE

TI
TO
MDC
LOC
BRG

Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From
To
D-R-C
RPM
WOB

DRILLING ASSEMBLY

No
Component
OD
ID
Length

1 BIT
159 0 0.20m

1 MUD MOTOR
176 0 8.38m

1 PONY SLICK COLLAR
160 70 2.88m

1 FLEX NMDC
160 69 9.33m

1 GAP SUB
163 74 1.70m

1 FLEX NMDC
160 69 9.27m

1 X/O
165 64 1.18m

1 DPI (4.5 DS40)
165 97 9.58m

1 REAMER
165 62 4.07m

6 DPI (4.5 DS40)
165 97 56.87m

1 JARS-HYD
165 1 4.00m

66 DPI (4.5 DS40)
165 97 627.55m

1 AGITATOR
165 0 5.48m

29 Drill Pipe
Stands
552.52m

0 Drill Pipe
Singles
0.00m

Kelly Down
-0.52m

Total
4088.30m

Weight of DC
2kdaN

Weight of String
49kdaN

HOLE CONDITION

Hole Drag
Up
Down

Torque at Bottom

Fill on Bottom

MUD RECORD

Mud Type
Water
Other

Time
06:00

Density
1070

Funnel Viscosity
45s/l

Fluid Loss
10cm/3

pH
7.5

Location of Sample
SHAKERS

Depth
3661m

PVT
26.5m3

CIRCULATION

Pump#
Type
Liner Size
SPM
Pressure
Hours Run

1 COMBINED
114 129 15000 8

2 COMBINED
114 70 15000 4

REDUCED PUMP SPEED

Pump No.
Pressure
Strokes/min
Depth

@ @ @ @

DEVIATION SURVEYS

Time
Depth
Deviation
Direction
Type

SOLIDS CONTROL

Equipment Name
Hours Run
Intake Density
Over Flow Density
Under Flow Density

CENTRIFUGE
4 1070 1050 1850

MUD MATERIALS ADDED

Product
Amount
Type

Boiler

Boiler #
Hours Run
pH
Stack Temp

1 8 10 260

TIME LOG

From
To
Elapsed
Code
Details of Operations in Sequence & Remarks

00:00 01:30 1.50 8A Trip in hole TO 2900m

01:30 06:30 5.00 3 Reaming from 2900m to 3757m

06:30 06:45 0.25 21 crew change meeting

06:45 07:45 1.00 3 continue to ream in hole

07:45 08:00 0.25 7 Rig Service/ function HCR 2 secs to close

TOUR 1

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

00:00

END TIME

08:00

BITS

Bit Number
3

Size
159

IADC Code

Manufacturer
REED

Type
TKC63-81

Serial No
A253526

Jets
11.1 11.1 11.1 11.1

Depth Out (m)
11.1 11.1

Depth In (m)
1615

Total Drilled (m)
2473

Hrs Run Today
0.00

Cumulative Hrs Run
32.50

Entry Date
2022/01/14

CUTTING STRUCTURE

TI
TO
MDC
LOC
BRG

Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From
To
D-R-C
RPM
WOB

DRILLING ASSEMBLY

No
Component
OD
ID
Length

1 BIT
159 0 0.20m

1 MUD MOTOR
176 0 8.38m

1 PONY SLICK COLLAR
160 70 2.88m

1 FLEX NMDC
160 69 9.33m

1 GAP SUB
163 74 1.70m

1 FLEX NMDC
160 69 9.27m

1 X/O
165 64 1.18m

1 DPI (4.5 DS40)
165 97 9.58m

1 REAMER
165 62 4.07m

6 DPI (4.5 DS40)
165 97 56.87m

1 JARS-HYD
165 1 4.00m

66 DPI (4.5 DS40)
165 97 627.55m

1 AGITATOR
165 0 5.48m

29 Drill Pipe
Stands
552.52m

0 Drill Pipe
Singles
0.00m

Kelly Down
-0.52m

Total
4088.30m

Weight of DC
2kdaN

Weight of String
49kdaN

HOLE CONDITION

Hole Drag
Up
Down

Torque at Bottom

Fill on Bottom

MUD RECORD

Mud Type
Water
Other

Time
06:00

Density
1070

Funnel Viscosity
45s/l

Fluid Loss
10cm/3

pH
7.5

Location of Sample
SHAKERS

Depth
3661m

PVT
26.5m3

CIRCULATION

Pump#
Type
Liner Size
SPM
Pressure
Hours Run

1 COMBINED
114 129 15000 8

2 COMBINED
114 70 15000 4

REDUCED PUMP SPEED

Pump No.
Pressure
Strokes/min
Depth

@ @ @ @

DEVIATION SURVEYS

Time
Depth
Deviation
Direction
Type

SOLIDS CONTROL

Equipment Name
Hours Run
Intake Density
Over Flow Density
Under Flow Density

CENTRIFUGE
4 1070 1050 1850

MUD MATERIALS ADDED

Product
Amount
Type

Boiler

Boiler #
Hours Run
pH
Stack Temp

1 8 10 260

TIME LOG

From
To
Elapsed
Code
Details of Operations in Sequence & Remarks

00:00 01:30 1.50 8A Trip in hole TO 2900m

01:30 06:30 5.00 3 Reaming from 2900m to 3757m

06:30 06:45 0.25 21 crew change meeting

06:45 07:45 1.00 3 continue to ream in hole

07:45 08:00 0.25 7 Rig Service/ function HCR 2 secs to close

TOUR 1

SIGNATURE OF DRILLER

Gary (Glenn) Gould

START TIME

00:00

END TIME

08:00

BITS

Bit Number
3

Size
159

IADC Code

Manufacturer
REED

Type
TKC63-81

Serial No
A253526

Jets
11.1 11.1 11.1 11.1

Depth Out (m)
11.1 11.1

Depth In (m)
1615

Total Drilled (m)
2473

Hrs Run Today
0.00

Cumulative Hrs Run
32.50

Entry Date
2022/01/14

CUTTING STRUCTURE

TI
TO
MDC
LOC
BRG

Gage
ODC
Reason Pulled
Total Run (m/hr)

METRES DRILLED

From
To
D-R-C
RPM
WOB

DRILLING ASSEMBLY

No
Component
OD
ID
Length

1 BIT
159 0 0.20m

1 MUD MOTOR
176 0 8.38m

1 PONY SLICK COLLAR
160 70 2.88m

1 FLEX NMDC
160 69 9.33m

1 GAP SUB
163 74 1.70m

1 FLEX NMDC
160 69 9.27m

1 X/O
165 64 1.18m

1 DPI (4.5 DS40)
165 97 9.58m

1 REAMER
165 62 4.07m

6 DPI (4.5 DS40)
165 97 56.87m

1 JARS-HYD
165 1 4.00m

66 DPI (4.5 DS40)
165 97 627.55m

1 AGITATOR
165 0 5.48m

29 Drill Pipe
Stands
552.52m

0 Drill Pipe
Singles
0.00m

Kelly Down
-0.52m

Total
4088.30m

Weight of DC
2kdaN

Weight of String
49kdaN

HOLE CONDITION

Hole Drag
Up
Down

Torque at Bottom

Fill on Bottom

MUD RECORD

Mud Type
Water
Other

Time
06:00

Density
1070

Funnel Viscosity
45s/l

Fluid Loss
10cm/3

pH
7.5

Location of Sample
SHAKERS

Depth
3661m

PVT
26.5m3

CIRCULATION

Pump#
Type
Liner Size
SPM
Pressure
Hours Run

1 COMBINED
114 129 15000 8

2 COMBINED
114 70 15000 4

REDUCED PUMP SPEED

Pump No.
Pressure
Strokes/min
Depth

@ @ @ @

DEVIATION SURVEYS

Time
Depth
Deviation
Direction
Type

SOLIDS CONTROL

Equipment Name
Hours Run
Intake Density
Over Flow Density
Under Flow Density

CENTRIFUGE
4 1070 1050 1850

MUD MATERIALS ADDED

Product
Amount
Type

Boiler

Boiler #
Hours Run
pH
Stack Temp

1 8 10 260

TIME LOG

From
To
Elapsed
Code
Details of Operations in Sequence & Remarks

00:00 01:30 1.50 8A Trip in hole TO 2900m

DRILL ASSEMBLY & SPECIAL EVENTS - ADDITIONAL DATA				Tour Sheet Serial No		Vendor Software Version		Year	Month	Day
				A0KC43_20220128_1A		Pason		2022	01	28
License No	Well Name	Surface Location		Prov	Loc Type	Unique Well Id				
0502001	BLACKSPUR HZ LEDUC-WB 16-11-51-2	14-03-051-02W5		AB	DLS	100/16-11-051-02W5/00				
Operator		Contractor		Rig No	Well Type	Re-Entry				
BLACKSPUR OIL CORPORATION		HORIZON DRILLING, DIV OF WESC		43	HORIZ	<input type="checkbox"/>				
Operator's AFE		Contractor's Job No		Spud Date Time						
21DR0012		57		2022/01/19 16:00						
Signature of Operator Representative		Signature of Contractor's Rig Manager		Rig Release Date Time						
Mike Bowen		Scott T Compagnon								



DRILLING ASSEMBLY					TOUR 1		DRILLING ASSEMBLY					TOUR 2		DRILLING ASSEMBLY					TOUR 3	
No	Component		OD	ID	Length	No	Component		OD	ID	Length	No	Component		OD	ID	Length			
1	BIT		159.00	0.00	0.20	1	BIT		159.00	0.00	0.20	1	BIT		159.00	0.00	0.20			
1	MUD MOTOR		176.00	0.00	8.38	1	MUD MOTOR		176.00	0.00	8.38	1	MUD MOTOR		176.00	0.00	8.38			
1	PONY SLICK COLLAR		160.00	70.00	2.88	1	PONY SLICK COLLAR		160.00	70.00	2.88	1	PONY SLICK COLLAR		160.00	70.00	2.88			
1	FLEX NMDC		160.00	69.00	9.33	1	FLEX NMDC		160.00	69.00	9.33	1	FLEX NMDC		160.00	69.00	9.33			
1	GAP SUB		163.00	74.00	1.70	1	GAP SUB		163.00	74.00	1.70	1	GAP SUB		163.00	74.00	1.70			
1	FLEX NMDC		160.00	69.00	9.27	1	FLEX NMDC		160.00	69.00	9.27	1	FLEX NMDC		160.00	69.00	9.27			
1	X/O		165.00	64.00	1.18	1	X/O		165.00	64.00	1.18	1	X/O		165.00	64.00	1.18			
1	DP(4.5 DS40)		165.00	97.20	9.58	1	DP(4.5 DS40)		165.00	97.20	9.58	1	DP(4.5 DS40)		165.00	97.20	9.58			
1	REAMER		165.00	62.00	4.07	1	REAMER		165.00	62.00	4.07	1	REAMER		165.00	62.00	4.07			
6	DP(4.5 DS40)		165.00	97.20	56.87	6	DP(4.5 DS40)		165.00	97.20	56.87	6	DP(4.5 DS40)		165.00	97.20	56.87			
1	JARS-HYD		165.00	0.71	4.00	1	JARS-HYD		165.00	0.71	4.00	1	JARS-HYD		165.00	0.71	4.00			
66	DP(4.5 DS40)		165.00	97.20	627.55	66	DP(4.5 DS40)		165.00	97.20	627.55	66	DP(4.5 DS40)		165.00	97.20	627.55			
1	AGITATOR		165.00	0.00	5.48	1	AGITATOR		165.00	0.00	5.48	1	AGITATOR		165.00	0.00	5.48			
224	DP(4.5 DS40)		165.00	97.20	2131.68	224	DP(4.5 DS40)		165.00	97.20	2131.68	224	DP(4.5 DS40)		165.00	97.20	2131.68			
70	HWDP (4.5 DS40)		165.00	68.00	664.13	70	HWDP (4.5 DS40)		165.00	68.00	664.13	70	HWDP (4.5 DS40)		165.00	68.00	664.13			
29	Drill Pipe			Stands	552.52	29	Drill Pipe			Stands	552.52	29	Drill Pipe			Stands	552.52			
0	Drill Pipe			Singles	0.00	0	Drill Pipe			Singles	0.00	0	Drill Pipe			Singles	0.00			
Kelly Down			-0.52			Kelly Down			-0.52			Kelly Down			-0.52					
Total			4088.30			Total			4088.30			Total			4088.30					
Weight of DC			2.00			Weight of DC			2.00			Weight of DC			2.00					
Weight of String			49.00			Weight of String			49.00			Weight of String			49.00					

SPECIAL EVENTS				
Tour No.	Event No.	Description	Time	Depth

TOWER 3		SIGNATURE OF DRILLER		Gary (Glenn) Gould		START TIME		16:00		END TIME		24:00														
BITS		DRILLING ASSEMBLY				MUD RECORD				DEVIATION SURVEYS				TIME LOG												
Bit Number		No	Component	OD	ID	Length	Mud Type		Water	<input checked="" type="checkbox"/> X	Oil	<input type="checkbox"/>	Time	Depth	Deviation	Direction	Type	From	To	Elapsed	Code	Details of Operations in Sequence & Remarks				
Size							Other												16:00	17:15	1.25	5D	continue circ. bottoms up			
IADC Code							Time												17:15	17:30	0.25	21	safety meeting with trican, packer plus			
Manufacturer							Density												17:30	18:30	1.00	25	drop ball and pump 2.0m3, let ball gravity drop for 15mins, pump 200l/min to			
Type							Funnel Viscosity																	land ball , press. up to 16.0mpa,bleed down to 5.0mpa, slack off test to		
Serial No							Fluid Loss																	30000dan compression, bleed off, rotate drill string 4 times , press. up to		
Jets							pH																	28.7mpa to shear setting ball		
Depth Out (m)							Location of Sample													18:30	18:45	0.25	21	crew hand over		
Depth In (m)							Depth						SOLIDS CONTROL							18:45	20:30	1.75	12C	Rig in cement head and Cement w/ Trican. Pump 1m3 Water, Pressure test to 45		
Total Drilled (m)							PVT						Equipment Name	Hours Run	Intake Density	Over Flow Density	Under Flow Density		MPa, Pump 2.5m3 Optimum Flush at 1160kg/m3 containing 5Kg/m3 Optimum Flush +							
Hrs Run Today							CIRCULATION				Pump#	Type	Liner Size	SPM	Pressure	Hours Run		36L/m3 MW-2W Mud Wash. Pump 3m3 (1.88) Scavenger T.A.C. Bulk Cement w/ 0.2%								
Cumulative Hrs Run																		AFA-7 + 0.4% TWR-4 + 0.5% Gel + 0.2% TDH-2 + 0.2% CFR-12. Pump 40.6m3 cement								
Entry Date																		at 1600 kg/m3 (38.12) (60% XS) T.A.C.-S with 0.2% AFA-7 + 0.4% TWR-4 + 0.5%								
CUTTING STRUCTURE		Drill Pipe		Stands														Gel + 0.2% TDH-2 + 0.2% CFR-12. Drop plug. Displace w/ 19.5m3 Retarder Water								
TI		Gage		Drill Pipe		Singles												+ 9.5m3 Clay/Inhib Water Bump plug @ 7 MPa over circulating pressure and								
TO		ODC		Kelly Down				Remarks:										hold for 5 minutes. Bleed back & check floats, floats held with 300L back.								
MDC		Reason Pulled		Total														Pull out of Liner Hanger & circulate bottoms up. 9m3 good cement returns to								
LOC		Total Run (m/hr)		Weight of DC														surface. Plug down @ 20:20. Pressure test Hanger & Liner to 14MPa high for								
BRG				Weight of String														11min each								
METRES DRILLED		HOLE CONDITION				REDUCED PUMP SPEED				Boiler				SAFETY												
From	To	D-R-C	RPM	WOB	Hole Drag	Up		Down		Pump No.	Pressure	Strokes/min	Depth	Boiler #	Hours Run	pH	Stack Temp	Safety Topic		MEHL	MACP					
					Torque at Bottom						@	@		1	8	10.5	220			45.00kdaN	10400kPa					
					Fill on Bottom						@	@						Mentoring green hands								
											@	@														

